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ABSTRACT

The annual conference of the National Public Policy Education Committee (NPPEC) is held to improve the policy education efforts of extension workers responsible for public affairs programs. This publication contains 26 conference papers: "Rural America and the Information Revolution: An Exploration of Possibilities and Potentialities" (David Pearce Snyder); "Observations on Agricultural Policy, Policy Reform and Public Policy Education" (John E. Lee, Jr.); "The Status of Agriculture in 1993" (Marty Strange); "A Legislative Perspective on Current and Future Changes in U.S. Farm Policy" (Chip Conley); "Farm Group Perspective on U.S. Farm Policy" (Harry Bell); "Public Policy in a Changing Society" (Otto Doering); "Innovations in Public Policy Education" (Alan J. Hahn); "Alternative Dispute Resolution Approaches to Conflict Management" (Ronald C. Faas); "Collaborative Dispute Resolution Processes" (Robert M. Jones); "Use of ADR in Extension Public Policy Education Programs and Roles Extension Can Play in Dispute Resolution" (Leon E. Danielson & Simon K. Garber); "Framing Public Issues and Working with the Media" (JoAnn Myer Valenti); "Building Coalitions for Educating and Problem Solving: Process, Roles, Warnings and Styles for Extension Involvement" (Fielding Cooley and Others); "Educational Coalitions, Political Coalitions and Roles for Extension" (Alan J. Hahn); "Ethical Issues in Health Care Reform" (Mark H. Waymack); "Health Reform: What the Clinton Plan and Alternatives Mean to Rural and Urban America" (Edward F. Howard); "Health Care Reform: The Implications for Health Data Systems" (Ronald C. Young); "A Case Study of Extension's Response to Health Care Reform" (Lorraine Garkovich); "Public Issues Education and the NPPEC" (Walter J. Armbruster); "Public Issues Education: A Cooperative Extension System Initiative to Improve Public Decisions" (Ayse C. Somersan); "Public Issues Education and the National Public Policy Education Committee" (Barry L. Flinchbaugh); "Environmental Policy: The Legislative and Regulatory Agenda" (Michael T. Olexa); "Impacts of Reduced Pesticide Use on the Profitability of the Fruit and Vegetable Sector" (Charles Hall and others); "Impacts of EPA Dairy Waste Regulations on Farm Profitability" (Ronald D. Knutson and others); "Environmental Policy and Natural-Resource-Based Economic Development" (Tim Phipps); "Environmental Policy: Impacts on Natural-Resource-Based Economic Development" (Robert P. Jones); and "Tourism, Natural Environments and Public Policy" (Clyde F. Kiker and Andrew Seidl). Also contains abstracts of presentations, poster and display session topics, and a list of conference participants. (KS)

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Increasing Understanding of Public Problems and Policies

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- THE STATUS OF AGRICULTURE AND RURAL AMERICA
- AN EVOLVING PUBLIC POLICY EDUCATION
- HEALTH CARE REFORM
- PUBLIC ISSUES EDUCATION AND THE NPPEC
- ENVIRONMENTAL POLICY: THE LEGISLATIVE AND REGULATORY AGENDA

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1977 Federal Policy Process • U.S. Energy Policy • World Food—U.S. Policy Choices • 1977 Food and Agriculture Legislation • Agent Training and Leadership Development

1978 Food and Nutrition Policy • Policy Options for Small Farms • International Agricultural Trade • The Land-Grant System and Public Policy

1979 Controlling Inflation: Alternative Approaches, Impacts and Implications • Policy Legislative Process

1980 Dispersed vs. Concentrated Agriculture • Ethics of Public Policy • Productivity • Rural Transportation • Energy Policy Issues • Policy Issues and Educational Approaches

1981 Government Programs and Individual Decisions • Public Support of Research and Extension • Agriculture in the 1980s • Methodology of Public Policy Education

1982 Domestic Economic Policy • Federal Government Role in Resource Management • Trade Policy • Financing Government Under Tight Budgets • Food Policy

1983 Economic Transition • Land Ownership Issues and Policy Education Approaches • The U.S. Food and Agricultural System in the International Setting • The Policy Education Process

1984 Federal Deficit • Providing Public Services in an Era of Declining Taxpayer Support • Water Policy • Distribution Issues in Food & Agricultural Policy • Methodology Workshops • Emerging Politics of Food & Agriculture

1985 The Changing Face of America • The Changing Face of Agriculture • Status of 1985 Agricultural and Food Legislation • Tax Policy Revision • Developing Policy Education Programs on Controversial Issues

1986 Balancing the Federal Budget • Effects of Agricultural and Trade Policies on the Competitiveness of U.S. Agriculture • Human Stress and Adjustment in Agriculture • The Food Security Act of 1985 and Public Policy Education for the Future

1987 Socioeconomics of Rural America • Rural Revitalization • U.S. Agriculture in the International Arena • Role of Values, Beliefs and Myths in Establishing Policy • Policy Education and the Policy Process

1988 Policy Choices for Revitalizing Rural America • Priority Issues for a New Farm Bill • Opportunities for Joint Public Policy Education • Emerging Issues in Agricultural and Food Policy • Emerging Resource Issues • International Agricultural Relations

1989 The Global Environment for the U.S. Economy in the 1990s • Family Policy • Rural Development Policy • Public Policy Educatin • Water Quality Policy

1990 An Evolving Public Policy Education • Safe Food and Water: Risks and Tradeoffs • Balancing Environmental and Social Concerns with Economic Interests in Agriculture • Structural Change in Food Industries and Public Policy Issues • Toward a New Europe

1991 Global Competitiveness, Productivity and Social Impacts • Public Policy Education Methods • Policy for Environment and Economic Development • Rural Resource Development and Work Force Productivity • Political Economy of the Dysfunctional Family

1992 Public Policy Education in the 1990s • Agriculture and Environmental Policymaking: Issues, Actors, Strategies • The Rural Social Infrastructure • Domestic Consequences of Evolving International Trade Policy

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1993

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FOREWORD

This publication reports the major discussions of the 43rd National Public Policy Education Conference held September 12-15, 1993, in Clearwater Beach, Florida. The 124 participants represented most states, the United States Department of Agriculture and other public agencies.

The conference is held to improve the policy education efforts of those extension workers responsible for public affairs programs. In turn, this should help citizens faced with solving local and national problems make more intelligent and responsible decisions.

Specific objectives were: 1) to provide timely and useful information on public issues; 2) to explore different approaches to conducting public policy education programs; and 3) to share ideas and experiences in policy education.

The Farm Foundation financed the instructional staff for, and the transportation of one individual from each extension service to, this conference which is planned in conjunction with the National Public Policy Education Committee. The Foundation also financed publication and distribution of these proceedings which are made available to state and county extension personnel, teachers, students and others interested in increasing understanding of public policy issues.

Larry D. Sanders, Chairman
National Public Policy
Education Committee

Walter J. Armbruster
Managing Director
Farm Foundation

January, 1994

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THE STATUS OF AGRICULTURE AND RURAL AMERICA

OBSERVATIONS ON AGRICULTURAL POLICY, POLICY REFORM AND PUBLIC POLICY EDUCATION

John E. Lee, Jr.
Mississippi State University

The intervention of the United States government in agriculture in the twentieth century is an explainable response to the basic characteristics of agriculture that generate instability, over-production and depressed prices. The concentration of large benefits among relatively few producers and diffusion of costs over a large non-farm population make policy reform difficult. The policies in place since the 1930s have had both positive and negative consequences from a societal perspective. While farm policies have gradually become less distortive, less expensive and increasingly sensitive to a broader array of social concerns, such as the environment and food safety, they still reduce the overall efficiency of the U.S. economy, regressively redistribute income and wealth, and divert the attention and energy of policymakers away from more pressing rural and social problems. Increasing the public's understanding of the consequences of alternative policies is essential for policy reform and is both the opportunity and awesome responsibility of public policy educators.

THE STATUS OF AGRICULTURE IN 1993

Marty Strange
Center for Rural Affairs

Five trends characterize American agriculture: Export dependence, diminished opportunity for beginning farmers, increasingly industrial production systems that reduce access to open markets, the privatization of science and interest in sustainable farming. Policy issues raised by these trends include the need to harmonize environmental, social and economic objectives of commodity programs, restoration of credit programs aimed at beginning farmers, more effective enforcement of anti-trust laws that address vertical market

arrangements, redirection of publicly-funded agricultural science to national policy objectives, and trade policy that seeks a more restrained role for the U.S. farmer in the world food system.

A LEGISLATIVE PERSPECTIVE ON CURRENT AND FUTURE CHANGES IN U.S. FARM POLICY

Chip Conley
House Committee on Agriculture

Agriculture policy is being pressured to change from directions other than administration policies to reduce government involvement. Deficit reduction legislation passed in 1993 made only modest reductions in agricultural commodity program spending. Agriculture appropriations provide one means of changing policies through program reforms and reductions in program spending. The National Performance Review to "reinvent government" will be another source of change as will trade policy liberalization and regulatory changes. Budget pressures, beginning in 1995 when a new farm bill must be written, will challenge agricultural interests and policymakers to make the most of diminishing federal resources.

FARM GROUP PERSPECTIVE ON U.S. FARM POLICY

Harry Bell
American Farm Bureau Federation

The 1994 farm bill will do much more than set prices. Interests outside and inside agriculture will load legislation with measures that address food safety, land use planning, wealth redistribution, conservation practices, government spending and trade. Environmental and consumer groups will use the farm bill to mandate their brand of politically correct agriculture. Various factions within agriculture will debate food safety, chemical use, biotechnology and food costs, conservation, sustainability and research for alternative crops and alternative uses of traditional crops. The public policy message from America's farmers to you—we need your help to develop practical approaches to today's farming challenges and common sense ways to farm better, more economically and environmentally.

AN EVOLVING PUBLIC POLICY EDUCATION

PUBLIC POLICY IN A CHANGING SOCIETY

Otto Doering
Purdue University

Many believe government is not working. Remedies include a different decision process, new values and new institutions. However, major changes in the nation itself must not be ignored. We are no longer the world's only economic powerhouse, our demographics are different and fundamental values have already changed. Policy decisions are difficult because of an increasing and divisive focus on the distribution of wealth and power. We need to better identify drivers of change and core issues of concern to society if public policy is to be more accessible, participatory and constructive for most citizens.

INNOVATIONS IN PUBLIC POLICY EDUCATION

Alan J. Hahn
Cornell University

Changes occurring in public policy education during the past five to ten years include: 1) richer and more complicated discussions of advocacy, 2) movement toward a genuine merger of content and process, 3) a richer and more complicated picture of how educational impact happens and 4) development of better language to talk about objectives and impacts. The emerging public policy education concept resonates with a widely-recognized societal need for better ways to practice politics.

ALTERNATIVE DISPUTE RESOLUTION APPROACHES TO CONFLICT MANAGEMENT

Ronald C. Faas
Washington State University

For years, extension public policy educators have placed their faith in the standard alternatives/consequences model's three common steps: 1) clarify the problem or issue; 2) develop alternatives; and 3) identify consequences of each alternative. An essential corollary of this model has been the notion of "the teachable moment."

By extending the "teachable moment," Alternative Dispute Resolution can be seen as an enhancement of the alternatives/consequences model.

COLLABORATIVE DISPUTE RESOLUTION PROCESSES

Robert M. Jones
Florida State University

The traditional use of litigation for dispute resolution can be time consuming and expensive, and has not always produced fair and wise solutions. Over the past decade, Alternative Dispute Resolution (ADR) processes such as mediation, negotiated rule making and policy dialogues, have become more common features upon the public policy landscape. ADR and Collaborative Problem Solving (CPS) are voluntary processes that involve many interests in a facilitated—or mediated—face-to-face negotiation. The impartial facilitator, often selected by the participants, assists in defining issues, exploring the parties' mutual interests and those that divide them, generating and assessing options and reaching an acceptable solution. These consensus-based negotiations, in which the agreements must satisfy all participants' interests, have the potential for broadening the options available to those seeking an acceptable balance between conflicting goals.

USE OF ADR IN EXTENSION PUBLIC POLICY EDUCATION PROGRAMS AND ROLES THAT EXTENSION CAN PLAY IN DISPUTE RESOLUTION

Leon E. Danielson and Simon K. Garber
North Carolina State University

The public policy educator has many roles at his or her disposal: Information Provider, Technical Advisor, Convener, Facilitator and Program Developer. The increased importance of issues programming and the increased priority given to measurement of results are creating additional pressures to take a "resolution-of-the-issue" approach toward public policy education. Extension public policy educators can respond by incorporating concepts and techniques from dispute resolution into their ongoing public policy education programs. This may involve an expansion of the group facilitation role to include Issue Facilitation (citizen participation, interest-based negotiation and consensus building) and adding the roles of Promoter of Dispute Resolution and Mediator. This change will require increased training on facilitation and mediation skills, provision of new teaching materials and increased support from extension administration.

FRAMING PUBLIC ISSUES AND WORKING WITH THE MEDIA

JoAnn Myer Valenti
Brigham Young University

How the mass media *frame* an issue influences audience perception, discussion and attitudes of acceptance or rejection, and impacts the likelihood an audience will act on the issue presented. This paper argues that issue framing provides media with their most powerful effects and offers recommendations for improving media relations and media attention to issues on the rural and farm agenda. The paper also summarizes a moderated dialogue between those in the audience at the 1993 National Public Policy Education Conference in Clearwater Beach, Florida, and a panel of journalists.

BUILDING COALITIONS FOR EDUCATING AND PROBLEM SOLVING: PROCESS, ROLES, WARNINGS AND STYLES FOR EXTENSION INVOLVEMENT

Fielding Cooley, Andy Duncan and Judy Burridge
Oregon State University

Some educators pay close attention to planning the coalition building process; others eschew process planning and operate by the seat of their pants. In either case educators can profit from using a variety of styles when participating in learning and problem solving coalitions. Fielding Cooley's section of this presentation outlines a coalition building process and corresponding roles. Andy Duncan deals with some issues of practical application in the field and, finally, Judy Burridge relates roles and practice to issue education styles.

EDUCATIONAL COALITIONS, POLITICAL COALITIONS AND ROLES FOR EXTENSION

Alan J. Hahn
Cornell University

Educational coalitions are different from political coalitions. Political coalitions are of two types—*advocacy* and *consensus-seeking*. Development of consensus-seeking coalitions is a reasonable goal for public policy educators; advocacy coalitions should probably be avoided. As extension increasingly works in coalitions, it needs to articulate a public policy education role that is both complementary to others and widely recognized as unique and important.

HEALTH CARE REFORM

ETHICAL ISSUES IN HEALTH CARE REFORM

Mark H. Waymack
Loyola University Chicago

Why is there a *moral* necessity for health care reform? What is the moral failure of our current health care delivery system? The current ethical crisis in health care delivery is rooted in our holding at least three different, conflicting conceptions of the ethics of health care delivery. First, we believe in an individual's *right* to medical care. Second, we regard health care as a business, obliged to the ethics of business. Third, we believe the health care system has a moral obligation to care for and promote the *public* welfare. Juggling all three "ethics" simultaneously is responsible for our current moral predicament.

HEALTH REFORM: WHAT THE CLINTON PLAN AND ALTERNATIVES MEAN TO RURAL AND URBAN AMERICA

Edward F. Howard
Alliance for Health Reform

Highlights of the Clinton health reform plan include universal coverage, managed competition within a budget, a standard benefits package, insurance reform and establishment of an overall limit for health care spending. States would set up alliances, administering subsidies for low-income people and low-wage employers, certifying health plans, and running data collection and quality improvement programs. Alternatives include two less intrusive "managed competition" proposals, an incremental plan featuring "medical savings accounts," rather like IRAs and a "single-payer" Canadian-style plan. We *will* have a health plan passed within the next year because the political case for reform is overwhelming.

HEALTH CARE REFORM: THE IMPLICATIONS FOR HEALTH DATA SYSTEMS

Ronald C. Young
Kansas State University

Health reform, whether at the state or national level, will require greater attention to health care data base development. This paper reviews many of the issues that have faced states as they strive to implement health care data bases and thereby draw policy implications for national systems development. The general purpose of the information system must be clearly understood by policymakers, system managers and users alike. Like the purpose of the system, the scope, the control, the content and the use of the system will determine its nature and its effectiveness in supporting health care reform.

A CASE STUDY OF EXTENSION'S RESPONSE TO HEALTH CARE REFORM

Lorraine Garkovich
University of Kentucky

Current proposals for health care reform may not address the spatial inequalities—the differences in life chances that arise merely from residential location in rural or urban places—that affect access to health care in America. Extension can help rural citizens focus the debate so reforms address their limited access to health services.

PUBLIC ISSUES EDUCATION AND THE NPPEC

Walter J. Armbruster
Farm Foundation

Public policy education evolved to allow extension staff to effectively educate on controversial public issues without taking a position. Public policy education specialists have always dealt with a wide range of topics, although the most visible educational materials of the National Public Policy Education Committee (NPPEC) focus primarily on agricultural commodity policy. The issues-alternatives-consequences model combines content expertise and process methodology. In recent years, the content embraced, as well as process developments, have expanded the usefulness of public policy education. The current interest in public issues education provides real opportunities to increase extension staff understanding of how to effectively educate on controversial issues.

PUBLIC ISSUES EDUCATION: A COOPERATIVE EXTENSION SYSTEM INITIATIVE TO IMPROVE PUBLIC DECISIONS

Ayse C. Somersan
University of Wisconsin-Extension

The Cooperative Extension System has defined Public Issues Education as "educational programs which have the objective of enhancing the society's capacity to understand and address issues of widespread concern." The vision is to become the premier educational resource to Americans as they relearn the practice of democratic politics. The goal is to assist the citizenry to become active and productive participants in the public decision-making process. The action agenda calls for Cooperative Extension staff at all levels to embrace this effort and to build their content and process capacities. The expected outcome of the initiative is improved quality of public choices.

PUBLIC ISSUES EDUCATION AND THE NPPEC

B. L. Flinchbaugh
Kansas State University

It is time the National Public Policy Education Committee (NP-PEC) truly broadens its base. Extension education on public policy issues must cut across many disciplines to provide the input citizens need, in the Jeffersonian sense, to make informed decisions. There is room for family issues, national resource issues and, yes, even price and income policy for farmers. There is room for all of us to apply our unique expertise! The record on farm bill issues needs to be replicated on other issues. It is time to fill the vacuum with some oxygen. What shall we call it? Public policy education, issue-based programming, public issues education? That is immaterial!

ENVIRONMENTAL POLICY: THE LEGISLATIVE AND REGULATORY AGENDA

ENVIRONMENTAL POLICY: THE LEGISLATIVE AND REGULATORY AGENDA

Michael T. Olexa
University of Florida

Environmental policy issues of interest to agriculture and likely to be addressed by the 103rd Congress include nonpoint source pollution, wetlands, endangered species and pesticide issues related to food safety and minor-use pesticide registration. If successfully addressed through law, there still remains the problem of implementation through regulation. The challenge for agency action will be to shape and implement regulations acceptable to diversified interests. The objective of this paper is to highlight the policy issues in the current legislative agenda, note the challenges for implementation and briefly address the opportunities that this agenda holds for extension.

IMPACTS OF REDUCED PESTICIDE USE ON THE PROFITABILITY OF THE FRUIT AND VEGETABLE SECTOR

Charles Hall, Ron Knutson, Ed Smith,
Sam Cotner and John Miller
Texas A&M University

This study determines the impacts of reduced chemical use on fruit and vegetable crops. Specifically, the yield and per unit cost impacts of eliminating the use of insecticides, fungicides and herbicides was evaluated, as well as the impacts of a 50 percent reduction in the number of applications. The impacts generally were substantial but highly variable among regions and crops. The fresh market crops tended to experience larger yield reductions than the processed market crops. Sweeping pesticide-use reduction involving more than one pesticide category would have more adverse (synergistic) impacts on yield than strategies targeted toward particular pesticides.

IMPACTS OF EPA DAIRY WASTE REGULATIONS ON FARM PROFITABILITY

Ronald D. Knutson, Joe L. Outlaw and John W. Miller
Texas A&M University

With the initiation of dairy waste regulatory activity in Texas and Florida during the early 1990s, questions have arisen regarding the impacts of these regulations if extended throughout the United States. The Agricultural and Food Policy Center (AFPC) system of representative dairy farms provided a unique opportunity to evaluate the impacts of these regulations on dairy farm profitability if extended to all other states.

ENVIRONMENTAL POLICY AND NATURAL-RESOURCE-BASED ECONOMIC DEVELOPMENT

Tim Phipps
West Virginia University

Environmental policy involves trade-offs among alternative resource uses, economic development and environmental quality. For mining, there are trade-offs between the economic value of the resource and the environmental costs of extraction, processing and use. Forestry presents the perplexity of a resource that has one type of value when it is harvested and a mutually exclusive value as a standing forest. Fisheries add the complication of a resource that has, in many areas, been severely damaged by nonpoint sources of pollution. Finally, outdoor recreation is a crosscutting issue affected by environmental quality and the decisions on forestry and fishery management.

ENVIRONMENTAL POLICY: IMPACTS ON NATURAL-RESOURCE-BASED ECONOMIC DEVELOPMENT

Robert Phillip Jones
Southeastern Fisheries Association

Clean air, clean water and clean land policies, if totally implemented, would have dramatic positive impacts on the economic development of the fishing industry. Public policy issues that need to be re-examined include flawed science, netting ban, allocation of resources among user groups, water quality, endangered species, marine mammal protection, coastal zone use, turtle excluder devices, by-catch reduction devices and transfer of marine resource management to game and fish commission. The elimination of commercial fishing would have monumental social and economic costs. There needs to be a well-thought-out public policy toward production of food from the sea.

TOURISM, NATURAL ENVIRONMENTS AND PUBLIC POLICY

Clyde F. Kiker and Andrew Seidl
University of Florida

Tourism, although a significant economic sector worldwide and the major sector in locations such as Florida and the Caribbean, has received little explicit attention by economists and policy analysts. Especially poorly understood is the relationship of tourism to its natural and social settings. Few explicit public policy forums exist for dealing with the wide array of unfolding issues. The dominant public policy perspective of tourism is as a component of economic growth, as a means of increasing employment. Issues concerning the quality of the social and environmental settings are just beginning to be raised. There are public policy education opportunities in areas where tourism is an important sector and introduction of systematic institutional approaches can lead to improved public participation in setting the direction of tourism.

The Status of Agriculture and Rural America

RURAL AMERICA AND THE INFORMATION REVOLUTION: AN EXPLORATION OF POSSIBILITIES AND POTENTIALITIES

David Pearce Snyder
Consulting Futurist

On the Threshold of the Twenty-first Century

The remarkable improvements sustained by American agriculture over the past century have contributed immeasurably to our national quality of life, to our economic strength at home and our stature in the larger global community. In spite of these singular achievements, however, rural America appears not to have prospered all that much, and the present outlook for the family farm is problematical at best. In 1900, 60 percent of all Americans lived in small towns and rural areas, with more than 40 percent of us actually living on the land, on farms. Today, 25 percent of the U.S. population lives in rural areas and just 1.9 percent on farms proper.

Of course, 25 percent of 250 million Americans is still 62 million people; a large rural nation by any standard. In fact, in absolute numbers, our rural population is greater today than at any time in the nation's history. A more troubling trend is the recent apparent decline in rural prosperity. Median household income in rural areas has fallen or remained stagnant for most of the past twenty years, and poverty in rural areas has risen substantially.

By 1990, rural poverty rates had begun to match U.S. urban levels, with 20 percent of rural households earning incomes at or below the poverty level. The slow growth and faltering prosperity of rural America are noteworthy when compared with the fact that, over the past century, the amount of acreage under cultivation in America has essentially doubled from 25 percent of all U.S. land in 1890 to 51 percent in 1990, and there has been a twentyfold increase in annual agricultural income, from roughly $5 billion in 1890 to $100 billion in 1990.

The conventional explanation for rural decline in the face of burgeoning agricultural productivity has been the "industrialization" of American farming through successive waves of technology. Against a backdrop of rising and falling national economic prosperity and episodic surges in population, the march of technologic progress across rural America has steadily increased agricultural productivity through the replacement of labor by capital-intensive equipment and supplies. Simultaneously, workers, made redundant on the land over the past century, found economic opportunity in the cities where industrial technology created an endlessly expanding demand for labor.

So long as cities continued to offer attractive employment to surplus rural labor, the process of agricultural industrialization disrupted farm families' lives, but did not serve as a barrier to the steady, generation-to-generation rise in their prosperity. Less fortunate were the generations of small farmers who remained on the land and always depended on non-farm earnings for most of their income. So long as agriculture remained labor intensive, rural America was densely populated with farmers, farm workers and their families who needed a full range of basic goods and services. This marketplace demand, in turn, generated salaried employment to augment the characteristically inadequate small farm income.

Unfortunately, the workers made surplus to the agriculture sector took their incomes with them when they migrated to the city. With the departure of that income, there was less demand for the retail trade and consumer services that once provided supplemental employment for the small farmers and their families. Over time, those farmers who adopted industrial technologies and scale of operations prospered, while small-scale farmers increasingly operated at the margins of the economy and technology, to be wiped out by the hundreds of thousands during periods of economic downturn, such as 1981-1983.

Ultimately, technology changed the fundamental nature of farming in America. Before the Industrial Revolution, the production of food and fiber was the dominant economic activity in the United States and, with the exception of a few bulk commodities, involved mostly small-scale producers competing in local or regional markets. Today, in our mature industrial economy, a combination of production and distribution technologies have afforded America's farmers the advantages of industrial-scale operations and access to massive national and international markets, enabling fewer than 4 percent of all establishments—100,000 farms—to produce more than 50 percent of the gross sales of the entire U.S. agricultural sector.

The concentration of American farming into an ever-shrinking number of larger and larger producing units is an entirely predictable consequence of the industrialization of agriculture. Economists have long understood the propensity of mature mass markets to become oligopolistic. And while farming is not nearly so concentrated as steel making or auto manufacturing, the underlying forces are the same. Economies of scale give the large, well-managed producer so many competitive advantages over smaller producers in most mass markets that, eventually, all small producers are either absorbed or otherwise eliminated from competition. There are no "mom-and-pop" steel mills, no friendly neighborhood oil refineries in mature, labor-intensive industrial America. A straight line extrapolation of the industrial model upon the U.S. agricultural sector suggests that, eventually, the traditional family farm will simply become unviable in the face of industrial-scale economics.

Basically, America's small family farms have been—and will continue to be—the victims of industrial era productivity-enhancing agricultural technology. In fact, during the past twenty years, agricultural productivity has risen much faster than that of the nonfarm U.S. workplace, so that those displaced by greater efficiency on the land cannot easily find new careers in cities already filled with unemployed industrial workers made redundant by increasingly productive foreign manufacturers. Recently, moreover, the productivity of foreign farmers has even begun to challenge our once seemingly unique capacity to increase the output of America's farms to feed not only ourselves, but much of the rest of the world.

Much of the rest of the world is now using the same technologies that have explosively increased our own agricultural productivity. The "Green Revolu tion," its most powerful weapons first created here in America, has swept across the farmlands of the world, boosting the food production of both developed and developing nations alike. Because of greater national self-sufficiency, the total volume of world bulk crop exports has declined since the mid 1980s, as has the U.S. share of those exports. In response to the twin realities of our own continuing increases in productivity and falling foreign demand, the U.S. has already taken more than 100 million acres of cropland out of production in the past ten years, nearly a 30 percent reduction. Moreover, the conversion of the old Soviet Bloc to free market economics and private land ownership seems likely to make the world's last great grain importer self-sufficient within less than a decade, further reducing global demand for America's surplus output.

Taken together, the parametric trends of the recent past are converging to project a compelling vision of agriculture in Twenty-first Century America, in which 90 percent of commercial agricultural output will be concentrated in the hands of fewer than 50,000 farm firms, franchisees, co-ops, and holding companies. The remainder of our agriculture sector in such a scenario would be made up of one million or so part-time, boutique and "hobby" farmers. Assuming the continuation of agriculture productivity improvements at post-WWII rates, plus shrinking foreign demand and stable domestic markets, another 100 million acres of land are likely to be withdrawn from cultivation in the United States by 2025, with the number of rural residents actually beginning to fall sometime shortly after the year 2000.

If the mass industrialization of our agriculture continues, human habitation will recede from the land, even in areas that are agriculturally productive. Farmers, mostly salaried employees by 2025, will live in the still-dwindling numbers of viable rural communities—mostly county seats—or in new communities built around interstate highway junctions and interchanges. Many farmers and farm families displaced from agricultural production in this scenario will remain trapped on the land, unable to find improved economic opportunities in the cities. Characteristically, this is likely to drive rural marriage and fertility rates down to match urban rates. The ultimate evolution of this vision would be a Twenty-first Century rural America in which most farmers will commute out to work at agricultural production sites from towns that will increasingly be scattered like social oases in vast uninhabited "deserts" of high-tech, high-yield farmland.

Happily, past trends alone do not dictate the future, although they *are* powerful forces that instrumentally shape our institutions, our social utilities and our uses of technology. Equally powerful in shaping the future are future trends and developments. Free trade, for example, if adopted worldwide, would almost certainly be a bonanza for U.S. agriculture, opening literally billions of mouths to America's bounty as the superior free market producer of food. Unfortunately, the expansion of free trade is dependent upon political action, which is not reliably forecastable. However, demographics *can* be reliably forecast, and the United States is already the world's third largest domestic market (254 million). With the passage of NAFTA, that will expand to include Mexico's 90 million and Canada's 27 million. That 370 million is projected to grow to more than 550 million people by 2050, as North America—including the United States—is expected to experience the fastest population growth among all of the mature industrial nations.

With projected domestic market growth in the hundreds of millions of people, U.S. agriculture obviously need not fear extinction, nor even, perhaps, acreage reductions. But what about the family farm and rural, small town America? Will these cultural icons of our past survive into our future only as distant memories, rural life farm museums and segments of history disks? Are there future realities that will alter the long-term industrialization of American agriculture? More importantly, are there compelling public interests or reasons for contravening this free-market trend, and are there legitimate policy options for doing so? To consider these questions at all meaningfully, it is necessary to put them in the larger context of the nation as a whole and, in particular, of what is going on in the rest of the world's biggest economic enterprise, the United States of America.

The United States in the 1990s

During the 1980s, U.S. nonfarm employers spent $1 trillion on new production technology, and their productivity did not go up any faster than it did in the 1970s when they spent only $300 billion on productivity-enhancing capital goods. From 1945 through 1965, U.S. productivity—and personal income—increased about 3 percent per year. In the past twenty years, by comparison, productivity and compensation rose an average of .7 percent to .8 percent per year, less than inflation! As a result, real weekly wages for salaried U.S. workers during the same time period have actually fallen nearly 20 percent, from $315 per week in 1972 to only $255 per week in October, 1992. Median household income remained more or less unchanged over the same period, but only because millions of wives and mothers entered the work force to augment their families' declining earnings.

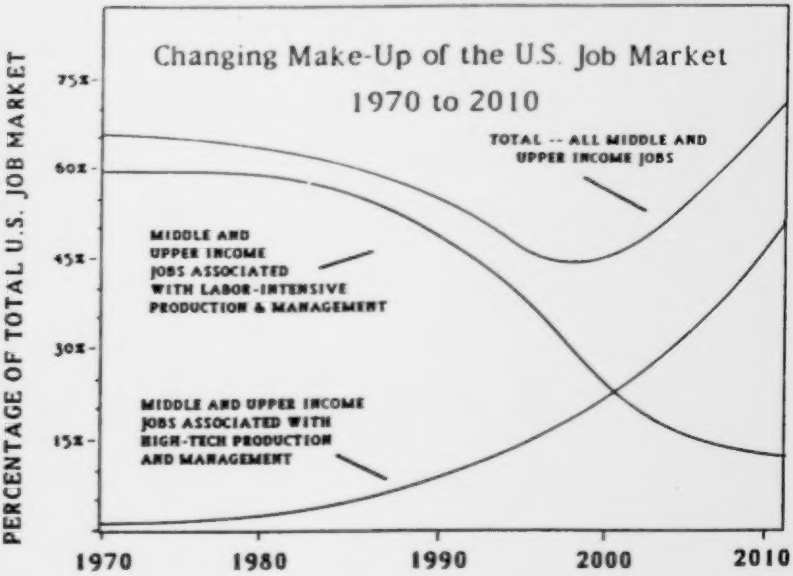
The failure of $1 trillion in new workplace technology to significantly improve U.S. productivity dismayed many observers, including the employers and stockholders who spent the money, and the supply-side economists who had designed the credit policies and tax incentives to encourage the expenditures in the first place. Subsequent economic reviews of the decade, plus research into technology transfer and innovation rates, quickly revealed the source of our failed expectations and the true nature of this moment—*our* moment—in history.

To begin with, it is now clear that America is in the middle of a genuine techno-economic revolution; the sort of transformational event about which historians write entire chapters in textbooks. As with all technological revolutions, the important reality is not the technology itself, but what the technology enables society to do. In the case of our own "moment" in history, computers and their related technologies are enabling us to shift from labor-intensive production to information-intensive production. By increasing the information content of every product and service, plus every operation and job of every productive activity, and then equipping every employee with the skills, resources and authority to make the best-informed plans and decisions, the productivity of every institution and every worker can be hugely increased!

But it will not happen overnight . . . or even in a decade.

It appears to take a generation—forty to fifty years—in order to incorporate the full productive potential of a fundamentally new technologic capability throughout all the levels and all the functions of all the private and public institutions in an entire national economy. It is, after all, a big project. Large systems are inherently stable, made so by the considerable inertia of their multiple internal, inter-connected sub-systems. In a system the size of America, there are literally hundreds of thousands of large sub-systems—corporations, federal, state and local government agencies, schools, hospitals, churches, etc.—each with spheres of interaction, overlapping concerns and both shared and conflicting interests.

Figure 1. Changing Make-Up of U.S. Job Market, 1970-2010.



All of these institutions, in turn, are made up of individual people who must *also* assimilate technologic innovation. And, of course, the technology itself takes time to evolve. The first commercial computers (1953-1954) were fifteen-foot-long electro-mechanical technologies weighing several tons, not at all like the electronic mini-marvels of today. And, while the 586-chip machine (introduced in April, 1993) is five times more powerful than the 486-chip machines (which we have not yet fully mastered), they are only one-fifth as powerful as the 686-chip technology projected to hit the marketplace by 1996 or 1997. Computers clearly have not yet fully evolved.

All around us there is ample evidence that large systems change slowly. But, just as importantly, they *do* change. And, over time, even incrementalism will produce revolutionary change. In the case of America's current "incremental revolution," the data suggest we are nearing the midpoint of our transition from labor-intensive production and management to information-intensive production and management (see Figure 1). The data also show that, during the first half of this forty- to fifty-year transition, the rate at which new, high-value jobs are created lags behind the rate at which existing high-value jobs are eliminated from labor intensive operations. It is this phenomenon more than anything else that has led to the decline in average weekly wages in America, and the commensurate stagnation in family income both in the cities and the countryside.

Clearly, it is in everyone's interest for the nation's employers to accelerate the rate at which they create new, high-value, information-intensive jobs. Fortunately, the experience of the 1980s has shown us how to do this. Even so, revolutionary change is never easy. It involves us all not merely in *one* "paradigm shift," but many "paradigm shifts," changes in institutional cultures, in the collective expectations and in the personal identities of every segment of the American society and economy.

It is, perhaps, comforting to know that the United States will not be passing through this turbulent transformation alone. We will be in the company of the other mature industrial nations of the world. In fact, as the inventors and developers of the new information technologies, we entered this revolutionary period in the early 1970s and began to encounter significant structural job displacement about ten years ago. The other mature industrial nations—notably those in Western Europe and the British Commonwealth and Japan—entered the cycle about ten years later than the United States and have only begun to experience serious structural unemployment in the past two or three years.

In all of the mature industrial economies, the temporary inefficiencies of economic restructuring have had similar effects. Long-term income growth has stagnated, constraining public sector revenues and necessitating reductions in government programs. Millions of jobs have been permanently eliminated, and underlying levels of long-term unemployment have risen. In the United States, unions have commonly accepted substantial reductions in pay and benefits in exchange for continued employment, while German steel and auto workers have accepted four-day work weeks and, in Britain, where miners' unions have refused to make such concessions, the government has simply shut down the coal mines.

The mid-career displacement of hundreds of thousands of middle-class workers has provoked another common phenomenon throughout the industrial world: the rise of right-wing nationalist and racist hate groups and political movements, as those who have lost economic security seek redress by attacks on immigrants and minorities whom they blame for their diminished expectations. Such socio-political turbulence is, of course, characteristic of periods of techno-economic transition, as historic accounts of Britain's original Industrial Revolution make clear. In the early Nineteenth Century, mobs of displaced workers stormed through the streets of Nottingham, Manchester and Leeds, breaking into mills and smashing the power looms whose prodigious output had eliminated their jobs.

Thus, the recent economic stagnation in rural America must be considered in the larger context of the nation's economic restructuring. Current administration proposals to eliminate thirteen of forty-three U.S. Department of Agriculture (USDA) agencies, 1,200 USDA field offices and 7,500 employees are much more a reflection of system-wide revenue constraints than they are the result of a national sentiment to reduce our commitment to progressive farming. Rising poverty is not a special problem of rural America, but a common problem of *all* America. And the future of U.S. agriculture, like the future of U.S. manufacturing, banking or retailing, will be much more dependent on how U.S. farmers use new technology to add value to their operations than it will on American agriculture's ability to mobilize political support for new farm programs or foreign trade initiatives.

Lessons from the Eighties, Strategies for the Nineties

While the $1 trillion that American employers spent on workplace technology during the 1980s did not increase our productivity, it *did* buy us a lot of valuable experience. In particular, we began to understand the true nature of the information revolution and what must be done to derive improved performance from electronic infocom technology. The lessons of the 1980s, while learned principally in America's factories and offices, are equally relevant to America's farms and rural communities. The universal application of these lessons, in turn, will be essential to the revitalization of all sectors of the U.S. economy and the restoration of our competitiveness and prosperity.

To begin with, it is now clear that, in the Twenty-first Century, we are *all* going to be "information" workers. This does not mean we will all have college degrees, wear tailored clothing and spend most of our time at desks in offices. There will still be millions of blue collar and consumer service jobs in the Twenty-first Century, but all jobs—from the shop floor to the executive suite, from the farm and forge to fast foods and pharmaceuticals—every job will have more information content in it. Moreover, to perform these jobs, it will be necessary for the worker to be able to use information to make important decisions on a daily, hourly and moment-to-moment basis. In the words of Harvard professor Shoshona Zuboff in her prescient book, *The Age of the Smart Machine*, in the 1990s, we are all going to be "informated."

Already, hotels are training their bellmen to conduct structured exit interviews of departing guests. Rental car lot attendants are being equipped with palm-top computers to calculate rental charges, record complaints and print receipts at carside. By the end of the decade, essentially all factory workers will not only be expected to use computers on the line, but to use statistical process control and Pereto analysis, and to work in performance improvement teams made up not only of co-workers, but representatives of suppliers and customers. Retailers are already being provided with evermore-detailed, real-time information regarding which combinations of products, promotions and display arrangements produce the highest profits.

Farmers, too, will increasingly be informated. Computerized expert systems will improve crop and animal yields while reducing costs. Electronic networks are providing a growing number of farmers with easy access to the latest agricultural research and moment-to-moment information on future commodity demands and prices. Mounting pressure from ecologists to cleanse farming of all chemicals in order to protect consumers and the environment from agricultural pollution is likely to force more stringent regulations upon farmers, thereby accelerating the growth of organic farming with its considerably more sophisticated information requirements. Producing for global markets—and for more culturally diverse domestic North American markets—can also be expected to substantially increase the diversity of information required by food producers to compete effectively.

Distinctive Enterprise Attributes in the Information Age

By purposefully incorporating more information into all of their planning and decision making, farmers—like those in all other productive enterprises—can improve the marketplace performance of their operations in three specific ways:

Adaptive Enterprise. Under the industrial system of mass production for mass markets, individual enterprises have characteristically concentrated on producing a limited number of outputs for a specific set of buyers or customers year-in, year-out. An interruption either in the supply of raw materials or customer demand generally leaves the industrial-style producer at the mercy of external forces, with no alternate sources of supply or alternative buyer for the organization's products or services.

The "informated" enterprise, by comparison, maintains an up-to-date inventory of alternate suppliers, distributors and buyers. The informed producer also knows the full range of outputs its existing resources may be used to produce. In anticipation of probable changes in its operating environment, the adaptive enterprise "informates" (trains) its employees to be able to perform a variety of tasks, as opposed to the single skills of industrial age workers. In fact, by informing itself about probable changes in economic, technologic and social externalities, the informated enterprise is able to take advantage of changes in its operating environment, creating new products and meeting emerging marketplace demands, even as the rigid, reactive industrial-style producer seeks protection from the effects of external change and longs for the good old days of "business as usual."

Precise Enterprise. As electronic info-com technology continues to rapidly increase the ease and reduce the cost of accessing and applying useful information to all of our decisions, plans and designs, all products and services will be more precisely tailored to the specific needs of individual buyers or users. Human factors engineers, for example, will incorporate ergonomic characteristics into the design of all tools, work stations and production equipment, dramatically increasing general levels of user productivity over the next generation of durable goods. Already, information products, from mass mailings and magazine advertising to insurance policies and credit cards, are being targeted at narrower and narrower specific markets, and manufactured goods are about to follow.

Laser tailors in London and New York are measuring customers and cutting out perfect suits "while you wait." In Japan, retail sales outlets of the National Bicycle Company offer customers a standing model bike that is universally adjustable to each buyer's measurements. Data from the floor model, set to an individual buyer's specifications, are transmitted to the factory which manufactures the custom bike within two weeks for only 10 percent more than a mass-produced bicycle. A growing number of producers of manufactured housing in Japan and the United States design customized homes for clients on computers that produce drawings, specifications and parts lists for rapid assembly. And the Iacocca Institute at Lehigh University, Bethelem, Pennsylvania, has produced a proposal, *21st Century Manufacturing Enterprise Strategy*, that envisions an American auto industry that, within fifteen years, will be able to build and deliver custom-made, defect-free cars within three days of receiving the order from the dealer.

Efficient Enterprise. One important result of the greater preciseness with which informated operations make plans and decisions will be the increasing efficiencies of such operations. In this context, the concept of efficiency includes, but goes considerably beyond, traditional economic notions of the productive uses of capital, labor and raw materials to incorporate the environmental costs of using alternative production processes and resources. Over the next ten years, the "Total Quality" movement and the environmental movement will converge in the informated enterprise to make manifest a fundamental operating principle originally coined by Henry Ford: "If it doesn't add value, it's waste!"

As we get better and better at applying all available information to the design of all of our products and the processes by which we produce and distribute them, we will gradually eliminate the great bulk of scrap material, harmful by-products and residual waste of all enterprise, including agriculture. Our ability to add value by adding information to all of our productive activities, including farming, will be crucial to sustaining the economic survival and prosperity of those activities.

Transformation to Information-Intensive Farming

In the abstract, the vision of a mature, information-intensive U.S. agricultural sector is enormously appealing. Instead of concentrating almost entirely upon twenty-five to thirty commercial crops for most of their income, America's informated farms would be producing a rich mix of products ranging from food and flowers to fibers, dyes and pharmaceuticals. Researchers in the United States, Great Britain and The Netherlands have already produced therapeutic proteins in the blood and milk of farm animals for substantially lower costs than the same compounds produced in the laboratory. And, around the world, geneticists have announced ongoing breakthroughs in producing vaccines in plants, as well as bio-polymers—natural plastics that will degrade in landfills. Genetic engineering is also improving the efficiency with which the environmentally safe fuel ethanol can be produced from cellulistic bio-mass.

Transgenic research also shows great promise for increasing the value of plant and animal food products, by improving their taste, appearance, texture and preservability. But the outlook for transgenic foods is, at this moment, problematical, due to the legitimate concerns of some portions of the scientific community about the unknown cumulative effects upon humans of consuming large amounts of genetically altered material that does not occur in the natural ecosystem. While this debate is likely to constrain the widespread introduction of transgenic food crops and farm animals in the United States, the use of transgenic farm products as a source of fiber, fuel, chemicals and materials is likely to grow rapidly from now on.

So long as consumer preference and environmentalist pressure continue to foster the growth of organic food production, information-intensive farmers will be better able to keep up with new developments in this rapidly expanding field, as well as with the emergence of new marketplace demands. And, should concern over ecological degradation from chemical intensive, industrial-style farming ultimately lead to the legislature's mandating of organic farming, electronic information networks would be critical to American agriculture's ability to make such a changeover without disastrous reductions in output and concomitant price increases.

Expanded exploration of the world's 250,000 naturally-occurring plant species for potentially desirable commercial characteristics will also be a source of greater diversification in agricultural production as farming becomes more information intensive. The New York Botanical Garden has just signed a $3 million contract with a major pharmaceutical company to search through its collection for medicinally beneficial plants. Similarly, the increasingly rich ethnic mix of the U.S. population, combined with freer international trade in agricultural products, will offer ever-increasing diversity of marketplace demand for the output of America's farms.

Starting Now: Some Purposeful Policy Interventions

Having made themselves "adaptive, precise and efficient" by their diligent use of information and information technology, U.S. farmers could begin to reverse the effects of mass-market industrialization and restore family farming as a viable basis for long-term prosperity in much of rural America. By adding more information to every aspect of their operations, a large proportion of small farms should be able to identify high-value niche markets for which they can profitably produce. But such a scenario is unlikely to occur without some purposeful interventions in national farm policies and programs. In particular, three interventions would be instrumental to revitalizing family farming and small town America:

1. The Rural Electrification Administration (REA) and its Rural Electric Cooperatives, having satisfactorily accomplished their original mission, should now be redirected to install an information infrastructure—or "info-structure"—for rural America, including electronic information networks, common-use data bases, program libraries and learning systems, etc., linking farmers, extension agents, agricultural research stations, commercial suppliers and buyers with one another. A principal objective of the REA should be to link all of America's farms by fiber optic cable. This new Rural "Computerization" Administration and its Rural "Information" Cooperatives should encourage the acquisition of computers and other electronic information technologies by individual farmers and farm households, through subsidies, bulk purchases and low cost loans. While America's prosperous farms are already moving to informate themselves, most smaller, marginal farms are unlikely to invest in info-com technology without assistance and encouragement.
2. While the Agricultural Extension and Home Extension Services will need to continue pursuing their traditional missions, they must—between now and the end of the Twenty-first Century—give priority to making America's farmers sufficiently "info-competent" that they can make full productive use of computers and the productive knowledge and power tools they make available. During the 1980s, employers learned that, in order to get the full yield out of new workplace technology, it was necessary to spend one dollar on training for every dollar spent on technology. The speed with which potential users learn mastery to apply a new technology is the principal governor of an organization's—or a nation's—overall rate of technology adoption.

If the REA *were* to be given the mission of installing rural America's info-structure, an obvious—and crucial—role for extension would be to assure that all rural Americans—especially those in the agricultural community—are able to use the new technologies to their fullest potential. Given the relatively small number of the total population directly involved in farming—or directly in-putting to farms and directly taking output from farms—it should be possible within ten years to make agriculture the first entire sector of the U.S. economy to be completely equipped and trained to make full productive use of information technology. In addition to substantially reducing USDA's costs to perform many of its various information, educational and regulatory roles, the informating of the nation's agricultural community would set the stage for the de-industrialization of farming, creating a new economic base for rural America.

3. As technology and training improve the capacity of farmers to be "adaptive, precise and efficient," rural economic development programs, policies and practices should increasingly shift toward promoting new agricultural enterprise. Farm-to-market electronic networks should enable farmers throughout the nation to locate and develop niche markets nationwide, just as Nineteenth Century farm-to-market roads enabled farmers to reach regional markets with their products. Given modern transport, burgeoning foreign and domestic markets for specialty produce can be met by farms throughout the U.S. ethnic markets, gourmet markets, restaurant markets, organic markets, industrial and research markets, etc.

   Electronic networks will permit the rapid organization of producer cooperatives and the easy sharing of information among peers which is essential for widespread producer innovations in all forms of commerce. Electronic networks would also make it easy for food processors and packagers to assemble consortia of suppliers for specific ingredients required by new product lines. Individual farms or farm partnerships could process and package pre-prepared foods themselves targeted at specialty markets and advertised over electronic bulletin boards. Farmers who are unusually proficient in particular product lines, or in coaxing high yields out of marginal land, would be able to sell their expertise to colleagues around the world.

Keeping Rural America Rural

Interestingly, there are a number of promising potential nonfarm forces for economic development in rural America today. In about one-half of the nation's 2,000 rural counties today, the population is growing as fast as the national average, or faster! In more than 500 rural counties, population in the 1980s grew at least three times faster than the nation's average, as population has migrated out of nearby cities and suburbs into the countryside. This reversal of the centuries-old urbanization trend has also been noted in Western Europe and, on both sides of the Atlantic, the explanations involve a number of similar factors.

To begin with, as advanced technology and organizational re-engineering have reduced the labor required for manufacturing, fewer factories need to be located near large labor pools, During the first half of the Twentieth Century, individual steel mills typically employed 1,500 to 3,000 workers, with the largest having more than 15,000 employees. Such operations had to draw upon large labor reserves that only cities possessed. But, now that technology has squeezed 85 percent of the labor out of 1950s manufacturing, new steel mills required only 175 to 350 workers, and they are being located in places such as Crawfordsville, Indiana, and Plymouth, Utah, not Cleveland and Pittsburgh. new auto plants—requiring roughly just 1,250 employees—are now popping up in Smyrna, Tennessee, and Normal, Illinois, *not* in Flint or Detroit.

The reason for the urban-industrial out-migration is straightforward enough. Cities are expensive places in which to live and work; land costs are high, labor costs are high, tax rates are high. Confronted by increasing foreign competition from countries with cheap labor, a growing number of U.S. industrial firms have been moving from the cities and suburbs to the countryside, where business operating costs are typically 15 percent to 25 percent lower than in adjacent metropolitan areas. While some economists and demographers believe that the fifteen-year spurt of "greenfielding" high-value manufacturing operations into rural areas is now beginning to decline, others believe that the migration of manufacturers into the countryside will continue unabated, draining economic vitality from the city and bringing it to the land. Policy interventions, such as the creation of "enterprise" and "empowerment" zones by federal and state governments, will clearly have some impact on this aspect of the rural future.

Whether greenfielding remains an important source of future rural growth, other trends seem likely to sustain a rural revitalization. Some states, such as Kentucky, are promoting the availability of their skilled, under-employed rural work force to urban employers via electronic networks. Electronic information technology will permit telecommuting, both by salaried workers and the self-employed. These folks—designers, editors, graphic illustrators, researchers, software writers, consultants, etc.—can live anywhere they choose that the info-structure permits. A large share of this small, but rapidly growing, population is choosing to live in rural areas because of the high quality—and relatively low cost—of living. And these people are bringing their incomes with them.

The twin virtues of low cost and high quality are also drawing another rapidly-growing flow of migrants into rural America—retirees. About 40 percent of retirees who move inter-state when they retire now end up in rural areas, and in those 500 rural counties experiencing the most rapid growth rates over the past twenty years, relocating retirees represented half or more of their growth. Recreational development has also boosted rural economies since the 1970s, often in conjunction with planned retirement communities and "full service" condominium developments. While the popular image of resort developments is that they are set in sites with golden beaches or snow covered ski slopes, a growing percentage are found along midwestern rivers, in the lakes of the Ozarks and among the hills and ponds of northern Michigan.

These in-flows of population and employment have already begun to revitalize large areas of rural America. But, where they have occurred, these developments have necessarily changed the character of rural America. While the U.S. Department of Commerce extols the opportunities offered by "non-urban growth centers"—i.e., prospering rural areas served by regional airports and interstate highways—these new communities are strikingly different from traditional, "small town" America. Modern commercial development "suburbanizes" rural areas, turning them into continuous strip malls of fast food clusters, auto dealerships, retail chain outlets and trailer parks. If rural America is to remain a unique cultural entity, it must retain its low density populations, scattered sparsely across a landscape, of productive and profitable working farms, and not five-acre "farmettes."

This does not mean we should attempt to bar the suburbanization of rural areas. To the contrary, the migration of footloose industries to rural areas—common to all mature industrial nations—is clearly an adoptive phenomenon of the free market that is beneficial to national economies in the aggregate. Similarly, it would be inappropriate to use policy intervention to prevent the withdrawal of agricultural production from marginal farm land, or the draining of population from regions in which the industrialized mass production of commodity crops represents optimum land use.

America's two million square miles of rural land should be managed as the multi-dimensional national asset it is, and not simply shaped to look like a single uniform ideal of what a rural landscape ought to look like. In this respect, the USDA should take its lead from the U.S. Department of the Interior, which has made a commitment to institute a comprehensive plan of "ecosystem management" for all public lands. America's agricultural lands should be regarded as a finite resource of inestimable value. Land that is marginal should be removed from production, renewed and husbanded against a future time when climatalogical changes, ecological disasters or the growth of global population may require that such lands be returned to production.

Similarly, rural land that is suitable for raising a wide variety of high-value agricultural products should be utilized in an environmentally sound manner to meet appropriate marketplace needs by farmers whose mastery of information technology enables them to be "adaptive, precise and efficient" commercial enterprises, rather than captive providers of a handful of bulk products at commodity prices to food processors and packagers who add most of the perceived value and make most of the profits. In summary, just as we are reinventing business, government, education and health care for the post-industrial era, we must also reinvent agriculture for the twenty-first century.

OBSERVATIONS ON AGRICULTURAL POLICY, POLICY REFORM AND PUBLIC POLICY EDUCATION

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Much has been written in recent decades by economists about the inefficiencies, injustices and environmentally degrading consequences of traditional U.S. agricultural policies, especially commodity price and income support policies. Yet farmers and many of their supporters continue to press for these traditional policies and Congress continues to produce them. And the general public seems relatively disinterested.

All of this is highly frustrating to agricultural economists and others who feel strongly that agricultural policy needs reform. One result has been a spate of new theories and explanations about why agricultural policy is "un-reformable."

Is it foolish to waste any more resources debating and analyzing agricultural policy? I do not think so. We should remember that the policies of the New Deal, which we still have in modified form, did not get put in place overnight. They were the products of at least two—perhaps four—decades of intensive debate, false starts and many frustrated initiatives. Even then, those policies might not have been adopted had it not been for a national economic crisis of historic proportions. So maybe it is not unreasonable that major new directions in agricultural policy may take a few decades of debate. And wouldn't it be ironic if a modern-day financial crisis—the national budget deficit—became the catalyst for sharply curtailing the policies that descended from the New Deal and thereby set the stage for a new era of rural policy?

Moreover, it is really not hard to explain why we got the New Deal policies, why they are hard to reform and what it will take to ultimately bring about reform.

Basically I treat four themes in this presentation: the past and present of agricultural policy are explainable; present policies do not serve the public interest very well; these policies can and will be gradually reformed; and extension public policy educators should be held accountable for their contributions to the process and outcome of that reform.

Why Government Got More Involved

The roots of modern agricultural policies come from the turbulent period between World War I and World War II. In retrospect, the policy developments of that period are explainable. Let me give you my view of four factors explaining public intervention—government involvement in agriculture in a major way—in the first half of the 1900s.

Economic and Physical Characteristics of Agriculture

First of all there are some basic characteristics of agriculture, some unique to the United States, that help explain the temptations and pressures for government to become involved in agricultural markets.

Farming is a biological process. This means production is inherently unpredictable and highly variable. Weather variations cause production variations. These, in turn, cause price variations. Farmers react to price variations and sometimes that makes the variability worse. Thus, farming is not like manufacturing cars or television sets.

The cobweb effect of disruptions in supply is important because it could mean wasted resources in production, unstable food supplies (including export disruptions) and undependable incomes to farmers. Thus, at various times, both producers and consumers have sought government involvement in agriculture to reduce instability of supplies and prices.

Resources in agriculture are relatively immobile. Land often has few alternative uses. It is kept in production as long as it can produce something that returns at least the out-of-pocket costs of production. Of course, land can be used for houses, shopping centers and recreation purposes, but only a small part of the land can be used this way. That was especially true in the 1930s and earlier. Labor was a bit more mobile in U.S. agriculture than was land, but not much more. Many farmers felt they were not qualified to do anything other than farm. Prior to WW II, there were few off-farm jobs readily available to farmers and farm workers. Thus, the labor resource was said to be "trapped" in farming.

Capital goods (barns, machinery, specialized facilities, etc.) in agriculture often have few alternative uses. Liquid capital, of course, is highly mobile and can quickly be moved to other parts of the economy. The importance of immobile resources to farm policy is that even though returns to land, labor and capital goods may be very low, these resources continue to be used to produce longer than would be the case in some other industries. Capital stock continues to be used to produce until it wears out, and labor stays in farming until the next generation comes along. As for land, the cropland base in farming has stayed about the same throughout the century. As a result of all this resource immobility, there is a chronic tendency toward over-production and depressed prices and incomes.

In recent decades, the mobility of some agricultural resources, especially labor, has increased. Nevertheless, over most of the last sixty years, resource productivity has grown faster than demand for food. The level of resources needed in agriculture has declined faster than resources have been withdrawn from the sector. The result has been depressed prices and below-average returns on investment in farming. The importance of this characteristic of the farming sector will become apparent shortly.

Farmers are price-takers, not price-makers. In the United States, the farming sector has come closer to being a purely competitive market than most other sectors of the economy. Unlike automobile makers and other businesses in which a few large firms dominate the market, there are too many farms for any one of them to be large enough to set their own prices. Prices are determined by the aggregate forces of supply and demand (in the absence of government programs). Thus, individual farmers are not constrained by concerns about how more or less production on their farms will affect prices. But, what farmers do in total does determine prices.

Agriculture has had rapid technological change and productivity growth. This is not so much a generic characteristic of agriculture as a basic fact of U.S. agriculture since the 1930s. During most of the twentieth century, and especially since the 1930s, there has been strong growth in the productivity of resources used in farming, often faster than total demand has grown.

This means the supply curve has been shifting to the right faster than demand has been shifting. In other words, the amount farmers are willing to supply at any given price has been increasing faster than the amount people are willing to buy at that price. The net result has been downward pressure on prices (real prices of basic commodities have trended down over time).

Food demand has grown slowly. The United States, like most modern industrial nations, is a "food mature" economy. This means that most of the population is relatively well-fed and well-clothed. As incomes rise, not much of the additional income is spent on food. In economists' terms, the income elasticity of demand for food is low. Furthermore, most of the additional expenditure on food is for services and value-added to food rather than to increased volume of food consumed. Population has also been growing slowly. The net result has been slow overall growth in demand for basic food at the farm level.

Demand for food has been price inelastic. Since the 1930s, and especially since the 1950s the amount of food consumed by people in the United States has not been very responsive to price. That means if the price of food goes down, consumers do not eat much more, and if the price of food goes up, consumers tend to sacrifice something else before they quit eating. The degree of responsiveness to price changes varies by type of food or commodity. Demand for foods perceived as more basic responds less, and demand for foods thought of as luxuries or less essential is more responsive to price changes.

The observation that the demand for food is price inelastic, or relatively unresponsive to price changes, has an important implication for farm policy. A reduction in supply leads to a proportionately greater rise in price. This raises the value of total revenue. The temptation to raise farm revenues by artificially reducing supplies on the market has bedeviled agriculture and policymakers since the beginning of modern agricultural policy in the 1930s, and some kind of supply control has been a consistent feature of farm policies for most of the last sixty years.

Combined effects of basic characteristics of agriculture. When the characteristics listed above are put together, it is easier to understand why agriculture has been viewed as unstable, risky and unprofitable. The pressures that lead to over-production, depressed prices and incomes, and instability—and the inelastic demand for food—help explain why the solution has always seemed to be to control supply, create artificial shortages and raise prices. Since no one farmer acting alone could raise prices by cutting his/her production, it seemed logical to have government be the agent to control production in order to get higher prices.

Incidentally, rarely have farmers relied solely on supply management programs to raise prices. Through the political process, they got the higher prices guaranteed first. Once higher prices were set (through loan rates and other price support tools), farmers and their organizations could then lobby for liberal treatment and loopholes on supply controls. Their efforts often succeeded, and that meant over-production, or production beyond what could be sold at the higher prices. But that was the government's problem!

Many of these basic characteristics of U.S. agriculture are common to agriculture worldwide, and most, if not all, apply to the industrial and food-surplus nations.

Societal Values and Beliefs

The second major factor explaining public intervention has to do with societal values and beliefs. An "agrarian fundamentalism" has been a dominant feature of the American culture from the early days of nationhood. This agrarian philosophy is a notion that farming is a morally superior occupation—work that is closer to God and nature. This philosophy has never been well articulated and stems from a mixture of ideas and roots from many sources. Thomas Jefferson espoused it. He argued that a nation of small freeholders was the best way to protect a democratic society. Small "family" farmers were seen to be honest hard workers who had a vested interest in the common good, because as freeholders they owned a piece of the nation.

This societal value was still powerful in the 1930s when a majority of people still lived in rural areas and had some direct or indirect connection to farming. Even today, many Americans are still only one or two generations removed from rural or farm life and can identify with the problems and benefits of farm living. The "family farm" still enjoys strong emotional and political support from the American people.

Economic Feasibility of Providing Assistance to Farmers

Third, by the 1930s, farmers were a small enough part of the total economy that it was *economically and politically feasible to make transfer payments to them.* When most Americans were farmers, farming was most of the economy. When farmers were doing poorly, the economy and public revenues did poorly. It was simply not feasible for a minority of the population to make transfer payments to the majority population.

As farmers became a smaller part of the total economy, providing some assistance to them was not only viewed sympathetically by the urban and non-farm population (many with recent farm roots), but was also increasingly financially feasible and less burdensome to non-farm taxpayers.

An observation: In general, poorer nations of the world, whose farmers make up a large part of the population and whose farmers tend to be even poorer than the rest of the population, tax agriculture. Wealthier industrialized nations, whose farmers make up a small part of their population and whose farmers tend to be wealthier than the rest of the population, subsidize farmers.

In both cases, national wealth is regressively redistributed. This seemingly perverse situation is merely a matter of practical expediency. In many poor nations, taxing agriculture is one of the few ways to get public revenue to invest in the rest of the economy. In rich nations, the rest of the population can afford, often at very small per capita costs, to support agriculture, and the political sympathy is there to make it happen.

1930s Economic and Social Conditions

The fourth factor that served as a catalyst for major government intervention in agriculture was the economic and social crisis of the

1930s. After the collapse of grain export markets following World War I, economic conditions in rural America were severely depressed for more than two decades. The Great Depression of the 1930s merely exacerbated the poor conditions that had prevailed in agriculture during the 1920s. During this period, most farms were small and their owners poor. Yet farming was still the predominant activity in most rural parts of the country and, in the 1920s, rural people were still nearly half the total population.

Thus, the large number of economically depressed people—a big part of the total population—constituted a major social problem as well as an economic problem for the nation. Addressing the problems of the rural population was a high priority during the 1930s, and providing financial assistance to farmers was one way policymakers thought they could help.

So, there you have my explanation for why the U.S. government got involved in modern farm policies. The basic conditions of agriculture led farmers to seek intervention on their behalf; strong agrarian values and beliefs gave the nation's people and policymakers warm fuzzies about helping "family farmers"; the growth in industrial wealth and the decline in numbers of farmers relative to the non-farm population made it possible to redistribute wealth from non-farm to farm; and a national economic and social crisis lit the match!

Characteristics of Policy Responses

Agricultural policies since the 1920s and 1930s have focused heavily on improving financial conditions for producers of selected commodities (an inherent unfairness), especially feed grains, food grains, cotton, oilseed and dairy products. Those policies have been varied and complex, but there have been some common characteristics.

Supply Management

Almost continuously since the 1930s, U.S. agricultural policy has contained some element of supply control.

Since farmers were too numerous to act in concert to manage supply (some farmer organizations tried and failed), the federal government has acted as their monopoly agent or manager. But, government has not always managed well.

Supply controls have sometimes been mandatory and sometimes voluntary (with incentives offered to get cooperation).

The objectives of supply management have been several:

- Increase commodity prices by "shorting" the market (with inelastic demand, this also increased revenues to farmers).

- Reduce treasury costs of price support programs.
- Assure a more stable supply of commodities to meet domestic and export needs.

Supply controls used in U.S. farm programs have tended to be indirect controls. Most often, for broad-acre crops, the attempts have been to control supply by controlling one major input, land. Meanwhile, no limits were put on other inputs such as fertilizer, pesticides, water and new technology In fact, these other inputs, including the credit to buy them, were often subsidized. Farmers also generally took their least productive acres out of production. The results have been slippage in land control and ineffective control of supply.

For most commodities, supply control has meant control of U.S. production. There are exceptions, such as sugar, whereby high prices are maintained by limiting imports.

Price and Income Supports

Since the late 1930s, supply control programs have been accompanied by price and income support programs. Although the earlier rationale for production controls was to reduce supply and strengthen prices, production controls in recent decades have come to be seen by farmers as the political price that must be paid to get access to price supports.

Prices have been supported in several familiar ways including non-recourse loans, target prices with deficiency payments and other price support mechanisms.

Price Stabilization

Several government-sponsored storage programs have been designed to stabilize prices by taking supplies off the market during times of surplus and putting them back on the market when there are shortages. These storage programs have been less than fully successful because of the political temptation to use them to raise prices and incomes, rather than to smooth out supplies and prices. Import quotas and barriers and marketing orders are other tools of price stabilization.

Risk Reduction

While the aforementioned characteristics of modern U.S. agricultural policy have transferred some farmer risks to the rest of society, there have also been specific risk reduction programs, such as federal crop insurance and loan guarantees.

Demand Expansion

Another recurring theme in U.S. farm policy has been the interest in strengthening commodity prices and producers' incomes by expanding demand for farm-produced products. Examples of such programs include: food stamps for the poor to expand domestic food consumption; disposal of surplus commodities to needy groups and charities; food aid for other countries; research on development and marketing of new products ranging from foods to bio-fuels; authorization of commodity "check off" collections for market-expanding research and promotion programs; support for private industry groups to set up overseas programs to promote use of U.S. farm products; export credits and credit guarantees; direct export subsidies; and public investment in research and technology to help the United States be a low cost competitor in world markets.

Consequences of U.S. Agricultural Policies

U.S. agricultural policies and programs have been put in place to achieve several stated and implied objectives. Among these are stabilization of farm commodity supplies and prices, enhancement of producer incomes, assurances of adequate supplies of affordable food and preservation of the "family farm" structure of the farming sector. Most serious analyses suggest that some of the intended benefits have been achieved, accompanied by many unintended side effects and longer-term consequences.

- *Programs reduced risk and supported a technological revolution in U.S. agriculture.* Price support provisions of farm programs did reduce risks in farming by stabilizing prices and increasing short-term profitability. With reduced risk, farmers were more willing to borrow money to invest in technological improvements and lenders were more willing to lend. This tendency was abetted by the establishment of new credit institutions just to serve agriculture and by credit subsidies. These new developments coincided with the availability of a stream of new technologies in the 1930s, 40s, and 50s. This technological revolution greatly increased the productivity, production capacity and global competitiveness of U.S. agriculture.

- *Agricultural policies improved farmers' incomes but gains were difficult to maintain.* Clearly, producers of some agricultural commodities had higher incomes in some years because of the various price support and subsidy programs. But the higher incomes contributed to forces that undermined the longer-term value of this income. Studies have shown that much of the higher income was capitalized into higher asset values, especially land values. Farmers received the benefit of these higher values of assets only if they owned the assets. The higher asset values also became higher longer-term fixed costs of production, and ultimately led to pressure from farmers to increase subsidies to offset the higher costs. Thus, the short-term gains in farmers' incomes led to a distortion in asset values, especially land, and contributed to an upward cost-price spiral.

- *Support policies led to over-investment in agriculture.* Higher incomes and subsidized credit led to over-investment in machinery and equipment, capital facilities and various new technologies. As a result, the tendency to overproduce farm commodities was compounded and greater reliance had to be put on supply control programs. Because domestic demand for farm products did not keep pace with growth in capacity to produce, exports also became a critical outlet for excess production. When exports did not expand as rapidly in the 1980s as in the 1970s, the over-investment in the U.S. agricultural production capacity became unsustainable, and for the first time since the 1920s and 1930s, there was a massive withdrawal of capital from the farming sector and a major deflation in asset values (Lee). This was a very wasteful and painful adjustment, but one that could be attributed in part to the policies that led to over-investment.

- *Agricultural policies fostered major structural change in the farming sector.* The combination of increased stability, productivity and technological change led directly to fewer and larger farms. This is because individual farmers or workers could directly manage larger and larger operations as technology was substituted for labor. Larger and more efficient tractors and equipment meant one farmer could farm much larger tracts of land on a timely basis. The technology revolution also meant farmers became less self-sufficient; that is, they became more dependent on non-farm suppliers of fuel, chemicals, seeds and other supplies and the credit to buy them. This also meant more of each dollar of income from commodity sales went to pay outside suppliers rather than being retained by the farmer who previously had produced most of the necessary inputs on the farm. The smaller net margin per dollar of income meant farmers had to increase sales volumes to maintain acceptable net incomes. Smaller farmers had to choose whether to increase the size of their operations to maintain competitive farm incomes, to get out of farming altogether, or to supplement their farm incomes with off-farm income. As a result of these forces, which are partly due to the agricultural support policies in place since the 1930s, agriculture has been transformed from a low-technology, labor-intensive industry to a high-technology, capital-intensive industry with much greater concentration of production in fewer, larger farming operations (a good summary is found in Tweeten). In the 1930s there were more than six million farms in the United States. Today there are about two million farms, farming about the same total acreage, producing a several-fold increase in total output, with one-half of the value of all production coming from about 75,000 large farms (Peterson and Brooks).

- *Agricultural policies have distorted resource prices and use.* As a result of incentives to over-invest and to use alternative inputs to offset limits on the amount of land that could be planted to a specific crop, the mix of land, labor and purchased inputs used to produce some crops is different from the most efficient mix that would be used if there were no distortions caused by agricultural programs. More chemical fertilizers and pesticides are used to get more production because land use has been limited by supply control programs. Supply controls that limit only land use have encouraged investment in irrigation systems. The inefficiencies in use of national resources, especially capital, resulting from distortions caused by farm policies, cost the overall economy thousands of jobs.

- *Consumer effects of agricultural policies are mixed.* The effects of current U.S. agricultural policies on the cost of food are small. Products made from basic commodities such as grain probably cost less than they might cost otherwise because programs for these commodities tend to stimulate over-production and lower prices and, currently, purchasers buy the commodities at market prices, not target prices. Also, the existence of support programs for more than five decades probably means the United States has larger production capacity, larger supplies and lower market price than would otherwise have been the case. Also, the abundant supplies and low prices of grains mean more plentiful supplies of livestock products. For some specialty commodities, such as sugar, peanuts and milk, consumers pay more because of the way support is provided to producers of those commodities. Take peanuts, for example. The policies set a very high guaranteed minimum price, restrict production to drive market prices up to the guaranteed price, and provide import barriers to cheaper foreign peanuts. The result is fewer peanuts at higher costs to consumers.

  Overall, U.S. consumers have access to abundant food at low costs, allowing them to spend more than 85 percent of their incomes for other needs and desires. However, the distortions in resource use because of agricultural policies have caused some other concerns for consumers. These concerns are food safety and environmental degradation. The food safety concerns came from heavy use of chemical pesticides and fertilizers that may leave unsafe residues on food or contaminate drinking water. Some of the environmental concerns also stem from the heavy use of chemicals and the more intense use of land and water because of the supply control and support programs.

- *Benefits and cost of U.S. agricultural policies have been distributed unevenly.* While modern farm policies and programs were originally put in place to assist a farm sector that was economically depressed and disadvantaged, the programs continue even though today's typical commercial farmers (defined as those with annual production value of $100,000 and more) have incomes greater than those for average non-farmers, and wealth many times greater. The result is a regressive redistribution of income from taxpayers generally to operators of commercial farms. Further, studies show that even among farmers, 80 to 90 percent of farm program direct benefits go to 10 to 15 percent of all farmers (Whittaker). Many farmers get no benefits at all if they do not produce the commodities covered by the farm support programs.

For producers of some specialty commodities, such as sugar, peanuts and milk, the benefits of the support programs are captured by a small number of producers, while the costs are borne by taxpayers and consumers.

To the extent that higher incomes resulting from support programs get capitalized into higher land values, the beneficiaries are landowners. If these are non-farm landlords, they get the benefit while farmers who rent the land have to pay higher rents.

U.S. agricultural support programs have provided assistance primarily to farm operators and asset owners, not to farm workers. Thus, the costs of some major technological improvements, such as mechanical cotton harvesters, have been borne almost entirely by the displaced workers and their families.

The distributions of benefits and costs of various agriculture support programs are neither well-documented nor well-understood, but they are clearly uneven.

- ***Treasury costs of U.S. agricultural policies have been high.*** In recent decades, most of the direct costs of farm support programs have been borne by taxpayers rather than consumers. This is because producers of grains, cotton and oilseeds receive most of their benefits as direct "deficiency" payments, rather than through artificially high market prices. For milk, both consumers and taxpayers have to pay because treasury costs are incurred to buy excess supplies, creating an artificial shortage and resulting in consumers paying higher milk prices.

  Most of the treasury costs of modern U.S. farm programs have been incurred since 1980 (Rapp). The 1985 farm bill lowered loan rates (support prices) to let market prices prevail and provided support through direct income (deficiency) payments. The resulting programs were more market-oriented but also more expensive.

- ***Some U.S. agricultural policies have fostered protectionist border policies.*** As is the case in most industrial countries, protectionist border policies have to be established to protect domestic support programs. High support prices require import controls to keep buyers from substituting cheaper foreign commodities for domestic commodities. This is especially the case today in the United States for sugar, peanuts and dairy products.

What Have We Learned?

First, I believe it is fair to say the United States has not had a comprehensive food and agriculture policy. What we have had is an income enhancement policy for producers of selected commodities. The policies have been essentially of, by and for commercial and larger producers of those commodities. For the most part, our policies have ignored or put low priority on farm workers, consumers, environmental interests, food safety and rural problems. Obviously, this is somewhat of an over-statement. Recent comprehensive farm bills have included titles on many of the aforementioned topics. But, it is still true that commodity price supports and income transfers to commodity producers have been the consuming interest of the agricultural establishment.

I believe this is gradually changing, partly because there are now broader interests represented around the policy negotiating table. Environmental programs such as water quality, wetlands, the Conservation Reserve Program (CRP), etc. and food safety programs are certainly becoming more prominent features of agricultural legislation. But hired farm workers and migrant laborers are not likely to see much regarding their interests in traditional farm bills. Efforts to ensure worker safety and health have mostly originated outside the agricultural establishment and have often been opposed by farmers and their representatives.

A *second* and more positive general observation is that there have been some successes.

- The establishment of new, agriculturally-oriented credit institutions and stabilization/support of commodity prices in the 1930s and 1940s, combined with the new technologies resulting from major public investments in research, made possible the surge in productivity that modernized American agriculture, lowered the real cost of food and made it possible to devote the vast majority of the nations non-land resources to improving other aspects of the quality of life. This is a huge contribution and should never be unappreciated. But it is not necessarily a rationale for continuing current programs into the future.
- Recent reforms have reduced distortions in prices and resource allocations. Replacing loan rates (support prices) with target prices and deficiency payments was a major step in the direction of a more market-oriented production sector. Also a combination of fixed program yields and "flex" acres (a reduction in the crop eligible for subsidies) means that, at the margin, as much as one-fourth or more of the production of affected commodities is being produced for market prices. These recent developments have

also forced farmers to reduce costs and improve their competitiveness in world markets.

- There have been improvements on the environmental front. Soil erosion is far less a problem today than fifty years ago. No-till and reduced tillage are common in some areas. Our pesticides are safer and used more judiciously (a far cry from the days when we sprayed DDT on everything and threw the empty containers in the creek). Compared to the 1950s, 60s and 70s, we are more likely today to preserve wetlands than drain them, and, in general, we are far more conscious of water quality and long-term sustainability than were previous generations.
- Food is safer to eat and less likely to be as fatty and salty as in the past. We are also more conscious of food safety and healthful eating habits.

A *third* observation is that often the programs put in place do not achieve the intended objectives, and often there are unexpected and unintended side effects, especially in the longer run. Examples abound and this audience is familiar with them. These outcomes result in part from lack of clarity and consensus about objectives of policy, failure to conduct adequate prior analyses of probable effects of policies, slippage between policy and implementation, and general unawareness on the part of policymakers and their constituents of the consequences of specific policies.

My *fourth* observation is that the legislative successes of the commodity organizations and the single issue interest groups have caused the general farm organizations to re-examine their strategies and to focus their energies more narrowly on commodity/producer support policies in recent years, in contrast to their representing rural interests more broadly earlier in the century (see Browne for a more in-depth treatment of this point). This probably also caused the U.S. Department of Agriculture (USDA) to become more narrowly focused on traditional commodity support and trade policies in the 1970s and 1980s, at a time when many in society were expressing interest in agricultural matters from a broader perspective. This tendency on the part of USDA was likely reinforced by the restructuring of the agriculture committees, especially in the U.S. House of Representatives.

A *fifth* observation is that our policies have often been very inefficient in achieving objectives such as income transfers.

Sixth, policies established long enough to build up a benefitting clientele, are hard to reform, even though the situation originally addressed by the policies may no longer exist. More on this shortly.

Finally, and to the point of this conference, the public's understanding of the agricultural economy and of agricultural policy is abysmal. This is true even among farm and rural people, to say nothing of the urban folks. This ignorance is not unique to agricultural policy. But what does it say for the effectiveness of decades of public policy education? This lack of public understanding makes it possible for special interests to develop policies that serve them well, but which may not be in the long-run interests of society at large or even of the agricultural industry.

At this point it serves the purpose of my thesis to briefly summarize my view of the status of agriculture, especially the farm production sector, and the policies for that sector.

Summary Status of U.S. Agriculture and Policy

What is the status of the American farm sector? That question can be answered in terms of financial conditions, organization of the farm sector, financial structure of the sector and in many other ways. For the sake of dialogue, let me throw out a perspective on the status of U.S. agriculture, especially the farm production sector.

The farm sector represents less than 2 percent of the nation's gross national product (GNP) and labor force (the proportion continues to decline) and less than 10 percent of the rural economy. In part that is a tribute to the success of investments in science and education, which allow providing a growing value of output with a declining drain on the nation's resources. This has permitted an abundance of food and fiber while freeing up resources to invest in other improvements in the material well-being of the population. That is the ultimate mark of a sector's success!

As an aside, most of rural America was populated to develop the natural resource based industries: agriculture, forestry and mining. All these industries have seen rapid technological advances, meaning that fewer and fewer people are required for more and more output. Thus, the amount of cropland and forest land has stayed about the same, but relatively few people are required to do the work. This has led to a natural depopulation of the countryside; a phenomenon having nothing to do with low commodity prices or hard times in farming—nor with evil plots in corporate headquarters or government offices.

So, we have a vigorous agricultural sector that is highly competitive, producing an abundance of food for our tables, but requiring very few people. How few? The more than 6 million farms of 1940 are now down to around 2 million. Of these, 75,000 farms produce one half of all the value of production. About 550,000 to 600,000 farms produce 90 to 95 percent of all agricultural production or virtually all commercial agricultural output. The rest of the producers, on average, are not poor, do not farm for a living and often do not even identify themselves as farmers. Within that set, of course, there is great diversity, from wealthy weekend hobby farmers to Black operators of small North Carolina tobacco farms living in poverty.

For the most part the 550,000 to 600,000 farms that make up the commercial farming sector are competitive and doing as well or better financially than clothing stores, restaurants and other small business sectors of the economy. In a given year, some farms make a profit and some lose, but that is not greatly different from other sectors of the economy. It is not unusual for other small business sectors to experience 10 percent and higher annual failure rates (based on data in Miller). In all of the 1980s, the toughest decade since the 1930s, the United States never had a farm business failure rate that exceeded 3 percent per year. In fact, in the 1980s the proportion of farmers going out of business for all reasons was not out of line with the long-term trend. The drop in farm numbers, the smallest of any decade since the 1930s, occurred primarily because of fewer new entrants than normal (Stam).

The 550,000 to 600,000 largest farms not only produce most of the nation's agricultural products, but the average income of their operators is above the national average for all households, their net worths typically far exceed those of non-farm households or comparable small businesses, and they receive most of the benefits of federal subsidy programs. In fact, since virtually all the deficiency payments and other direct subsidies go to producers of three commodity groups (feed grains, food grains and cotton), approximately 90 percent of total direct deficiency payments go to about 200,000 (about 10 percent) of all producers.

Thus, while the price and income support programs do transfer several billion dollars each year from taxpayers that on average have less income and wealth than the farmers receiving it (called regressive redistribution of income), there is little evidence to support claims that we would suffer a shortage of food and fiber without those payments. Moreover, because of the way we go about subsidizing agriculture, it costs about $1.40 to transfer $1 to farmers (Roningen and Dixit). Were it not for farmers' distaste of transparent welfare, it would be cheaper just to forget the programs and write checks directly to farmers each year.

Meanwhile, the "small family farmers," those other 1.5 million or so farmers whose names are invoked in support of farm welfare, get virtually no benefit from farm programs. In fact, we could greatly increase farm prices and do relatively little to affect the general well-being of small farmers (and in the process wipe out our foreign markets and have to shrink our agricultural plant dramatically).

This farm sector that provides an abundance of output with a smaller and smaller proportion of the nation's resources does so in ways that are less erosive and environmentally damaging than in the past. Better practices, safer chemicals, alternatives to chemicals and greater sensitivity to long-term sustainability are products of public and private investment and better technology and better education.

We still have problems in this regard but we are moving in the right direction.

In short, we have an agricultural sector that is providing ever greater abundance and quality at declining real cost to consumers for a declining share of national resources and doing so in ways that are increasingly sustainable for the longer term. The policy failures, if that term is appropriate, are not those of technological progress and structural change, but rather those of failing to adjust sector assistance policies to present day realities (if we were starting from scratch today, would the public stand for putting in place a set of programs like those we inherited from the 1930s?) and failure of public policy to match investments in technological improvements that provide a net benefit to society with investments in easing the burden on those who bear the brunt of the economic and social adjustments to the technological changes.

With regard to the latter point, most of the rural-based rhetoric today about problems attributed to "low farm prices" is really a reflection of the pain of those who lose in the adjustment process that accompanies technological progress—dying small towns, erosion of rural public services (health, education, etc.), youth leaving rural areas in search of jobs elsewhere, elderly left behind, nostalgia, loss of the familiar, etc., etc.—all part of the economic, social and psychological cost of change and progress. The response should not be to stop change and progress, but to have those who benefit from the progress (society in general) share some of that benefit to ease the pain of adjustment, especially for those least able to afford it.

Why Is Policy Reform So Difficult?

For years, economists have been demonstrating that current and traditional agricultural policies lead to distortions in resource prices, misallocation of resources, reduced economic efficiency, environmental degradation and even some regressive redistribution of income and wealth. In at least two decades of agricultural policy conferences, including this one, economists have rehashed these findings and then shared their puzzlement over the intransigence of established policies. I even detect an air of resignation among economists, as though accepting that the body politic just somehow does not grasp the obvious "truths" as we define them.

I believe the slowness of policy reform is logical and explainable. Recall the earlier statement that as farmers became a smaller part of a large industrialized economy, providing some assistance to them in a time of crisis (the 1930s) was not only viewed sympathetically by the urban and rural non-farm population, but was also increasingly financially feasible and affordable by non-farm taxpayers. In other words, large transfer payments could be made to a relatively small farming population at relatively small per-capita costs to the large non-farm population.

Once in place, farm assistance got institutionalized and, as farmers continued to become a smaller part of the population, that assistance became more difficult to reform. As a general rule, in instances in which a few people enjoy large benefits whose costs are widely diffused across many other people, policy reform is difficult. When policy reform poses threats to the large transfer payments from society to farmers, especially large farmers, those beneficiaries have both the incentive and the means to wage a defense of their benefits. Since reform generally implies only small per capita gains to the rest of society, debate about policy reform generally falls on disinterested ears among non-farm interests. You can guess the usual outcomes of those battles.

It is somewhat ironic that farmers have long worried about their declining numbers on the presumption that declining numbers mean declining political clout. In fact, it is their relative fewness that has given them their clout. With the number of producers receiving major benefits being relatively small, with agriculture still physically highly visible on the landscape and with every senator having some agriculture in his/her state, conditions are right for continued income and wealth transfers to farmers.

Several factors aid and abet the status quo. One is the structure of congressional committees which permits most of the debate about agricultural policy to be confined to the committees made up of a relatively small number of congressional members whose political commitment is to established beneficiaries of existing programs and whose political fortunes also benefit substantially from that commitment. An occasional Don Quixote to the contrary, most members of Congress not on the committees see little political capital in doing anything other than endorsing the recommendations of the agricultural committees. To improve their clout, agricultural interests have aligned themselves into specialty groups to focus their lobbying efforts on the even smaller congressional subcommittees that deal with their specialty.

Another factor making it easier for current beneficiaries of farm programs and their congressional supporters to get away with their protection of the status quo is the combination of misperceptions and ignorance about agriculture on the part of most of the population. This ignorance permits the use of rhetoric about saving the family farm, saving rural America and assuring that we do not run out of food to defend programs that: transfer most of the subsidies to farms quite different from those in the minds of sympathetic city folks; have little to do with the well-being of most people and communities in rural areas; and have virtually nothing to do with the adequacy of food supplies. Reducing this ignorance is the key to policy reform. It is also our responsibility as public policy educators.

Why Is Policy Reform Important?

With the costs of farm programs in the $8 to $12 billion range annually, out of the $1.5 trillion federal budget (about .7%), the cost of farm programs is no longer a rallying cry for reform. One could eliminate all farm programs having direct and indirect transfer payments and hardly make a dent in the federal deficit, let alone the budget.

A more important reason to reform farm programs is their inherent unfairness. As I have already discussed, they simply make no sense because they regressively redistribute income to those who are either wealthy or could cope without that additional income, and do little for people really in financial need. In the process they lead us to pursue distortive domestic policies and protectionist trade policies.

But, the most important reason to reform farm commodity and trade policies is that the continuing preoccupation with them diverts the energy of our people and the national leadership away from development of policies that address widespread rural poverty, urban and rural hunger, creation of a new rural economic vitality, and a host of other problems far more important than whether the Acreage Reserve Program (ARP) on rice should be 5 percent or 10 percent. These bigger problems should be shaping a whole new agenda and sense of purpose for the USDA. The emphasis and energy and endless debate over continuing adjustments in, and management of, past farm legislation and planning for the upcoming 1995 farm bill while major rural social and economic problems remain unsolved, are examples of fiddling while Rome burns!

Public Policy Educators and Future Agricultural Policy

This conference—and our jobs—are about public policy education. The job of educators is to educate. Education is not simply the sharing of our own knowledge and biases, but rather it is teaching people how to think for themselves. The operative current fad word is "empower." This means helping people learn how to find and process information such that their decisions maximize the satisfaction of their values and goals.

Those who have been empowered and motivated to seek and process information may even come to reevaluate some of what they had held as basic values. This is because some of those "values" may not be fundamental values at all, but rather old manifestations of values based on beliefs about the relationships between the old manifestations and more fundamental values. But if in the process of gathering and objectively processing new information, such people become convinced those relationships, in fact, do not hold, they are likely to question the manifestation they had previously thought of as a fundamental value.

For example, suppose you are an agrarian fundamentalist; you hold dear the concept of an agrarian society or the agrarian lifestyle because you feel people who work the soil and work with animals are closer to nature and therefore more likely to be keepers of the societal values—honesty, decency, God-fearing—that really are important to you. Further, you support, let us say, high price supports because you believe they preserve the agrarian lifestyle and therefore perpetuate behavior consistent with your basic values. But all of the above becomes questionable if you accumulate and process information convincing you that high price supports do not, in fact, assure the preservation of an agrarian society and, furthermore, that farmers are no more honest, decent and God-fearing as a group than are carpenters, salesmen or—perish the thought—agricultural economists.

Questioning is a part of the educational process, whether it leads to changing or reaffirming one's beliefs. Equipping people for productive questioning is simply a part of helping people learn about gathering and processing information.

The "information" learners need to process includes not only "statistics" and research results, but exposure to divergent views and the rationale behind those views. The know-how to process that information includes knowing how to critically evaluate the information, which may lead to seeking more information.

This may all sound a bit abstract, but it is what we, as public policy educators, are all about. Public policy education is hard work. It is much harder than traditional technology transfer whereby you relay to the customer the results of research or demonstrate improved practices. Even with technology transfer, you have to teach farmers and others how to evaluate the new information and make their own decisions. But it is much easier to convey the test results of a new crop variety or the comparative environmental impacts of new and old practices than to conduct educational programs in areas that tend to impinge on people's values and beliefs.

One of the big challenges in public policy education is to avoid the temptation to share one's own biases or views on "right" and "wrong" policies. I suppose some of that occurs in non-policy areas too; e.g., county agents who tell farmers what practices they "ought" to follow rather than teaching farmers how to evaluate alternative practices for themselves. But, the problem seems to be more pervasive and dangerous in the area of public policy. Also, farm policy tends to be more controversial and we, as public policy educators, are sensitive to controversy. Thus, extension workers and others involved in outreach have few qualms about talking with constituents about a new plant variety, but we often tremble at the prospect of conducting policy education, especially when the students are already on record with their views—loud and clear.

How do we make progress? First, I believe we should all be better students regarding agricultural policy. It is essential that people in the public policy education business be fully knowledgeable about the evolution of agriculture and agricultural policy, about the fundamentals of agriculture and society that drive policy and about how to analyze the consequences of alternative policies.

Second, in order to be better educators, we have to be better students of the learning process. That is, we really have to work at being better at helping people learn how to think for themselves and how to find the fodder for that thinking. The extension "learning workshop" that preceded the Orlando American Agricultural Economics Association (AAEA) meetings in August of this year was helpful, as are the workshops conducted annually at this conference. Perhaps we need to adapt and improve on those workshops and incorporate them more widely in in-service training in the states.

Another thought. Perhaps scholars and practitioners should be convened to draw up some national standards for evaluating the content and effectiveness of public policy education programs. Those standards could be used as guidelines for state and federal program reviewers.

I believe the future direction of public policy for agriculture depends very heavily on how producers and their representatives view their vested interests as being affected by alternative policies, and on how well the rest of the population and its leadership understand the state of agriculture and the consequences of agricultural policy. I truly believe in the effectiveness of transparency in policy. Despite all the farm policy conferences that have been held, and the public policy education programs underway, U.S. farm policy and its domestic and global effects are not transparent to the vast majority of the American people. Correcting that condition is our challenge.

It is important that public policymakers themselves understand the consequences of alternative policies and the effectiveness of alternative approaches to achieving policy goals. I am convinced some of them already understand much of what I have discussed in this paper. But leaders cannot go farther than followers will follow. Thus, if we want better policy from the Congress and the administration we have to have an educated public demanding better policy from their leaders. Policymakers *do* represent the sentiments of the majority of their constituents, and agricultural policy at any point in time probably reflects the state of perception and policy literacy on the part of producers and the general public.

Conclusion

I was asked to share some of my biases and observations. I have done as I was requested in the hope of stimulating useful dialogue. In keeping with my role of sharing biases, let me end with a forecast of the direction of agricultural policy over the next two decades.

Commodity support programs will not end abruptly in the near future but will slowly fade into the background and become less and less the center of attention. The budget will continue to constrain expenditures, but that could mean expenditures continuing in the $6 to $12 billion range for several more years. Budget pressures could force some creative thinking about the tools of farm assistance. If the House and Senate conferees agree to eliminate the wool and honey support programs this year, that will set a precedent. But the precedent will more likely be applicable to minor commodities than to the big three: cotton, grains and oilseeds and dairy. The clout for those major, widely-produced commodities is still substantial.

Commodity support programs will also slowly become less attractive to producers. As pointed out earlier, because of fixed program yields, 0-92 type programs and reductions in the acres eligible for payment under the flexible acreage program, the proportion of grain production covered by target prices and deficiency payments is now likely below three-fourths and declining. In time this could reduce program participation and hence effectiveness of supply management.

Also, traditional commodity policy will fade into the background because of the pressures of other issues and constituencies. Already more than half of the USDA's budget goes for food stamps and food assistance programs. More than one third of USDA's employees work for the Forest Service. The farm assis tance programs account for less than one-fourth of USDA's budget. Still, the secretary of agriculture tends to be consumed by traditional farm commodity policy issues. This is true because we are always in the process of implementing a recent farm bill, managing existing legislation or preparing for a new farm bill. This is also true because we have an accumulation of sixty years of farm programs that require a continuous flow of day-to-day operational decisions by the secretary. However, as new issues are around longer, and laws and regulations begin to accumulate for those new issues, more of the secretary's attention will be drawn to necessary decisions in the management of those programs, and she/he will be less preoccupied with traditional commodity programs. That is already beginning to happen for environmental programs and, to a lesser extent, for food safety. As the attention of the secretary is forced to shift, and as new infrastructure and political alignments develop around the new issues, the character of the USDA will change also; more than it already has.

Finally, within the next five to ten years, the generation of people who have staffed the USDA and the congressional committees during the post World War II period, mostly white males with farm backgrounds, will have retired. In fact, within the next two years USDA is projecting that about half of its senior executives will retire. These are the experienced people who have grown up with and managed the traditional agricultural policies for the past three or four decades. This retiring generation will be replaced in the USDA, congressional committees and Washington lobby groups by a generation that comes largely from an urban background and, particularly in USDA, is more reflective of the larger population mix. This new generation will be talented and competent. But their understanding of, and their emotional commitment to, agriculture will be different from those of their predecessors. Moreover, because of their backgrounds, they will bring to their jobs less of a farm perspective and more of a broad orientation toward a whole new array of social, environmental and economic issues. In that environment and with all the other changes gradually taking place, agricultural policy will be a whole new ball game.

REFERENCES

Browne, William P. *Private Interests, Public Policy and American Agriculture.* Lawrence, KS: University Press of Kansas, 1988.

Lee, John E., Jr. *Farm Sector Financial Problems: Another Perspective.* Washington, DC: USDA/ERS, AIB 499, May, 1986.

Miller, James P. *Survival and Growth of Independent Firms and Corporate Affiliates in Metro and Non-metro America.* Washington, DC: USDA ERS Rur. Dev. Res. Rep. 74, Feb. 1990, pp. 5-6.

Peterson, Neal R., and Nora L. Brooks. *The Changing Concentration of U.S. Agricultural Production During the 20th Century.* Washington, DC: USDA ERS Agr. Info. Bull. 671, July, 1993, p. 5.

Rapp, David. *How the U.S. Got into Agriculture and Why It Can't Get Out.* Washington, DC: Congressional Quarterly Inc., 1988, p. 5 (Updated with annual data from USDA).

Roningen, Vernon O., and Proveen M. Dixit. *How Level Is the Playing Field?: An Economic Analysis of Agricultural Policy Reforms in Industrial Market Economies.* Washington, DC: USDA ERS For. Agr. Econ. Rep. 239, Dec. 1989, p. 25.

Stam, Jerome M. "An Analysis of Farm Financial Stress and Farm Exits in the 1980's." Paper presented at the Northeastern Agricultural and Resource Economics Association annual meeting, June 18-20, 1990, Truro, Nova Scotia.

Tweeten, Luther. "American Agriculture: Organization, Structure, Institutions, and Policy." Paper presented at XXI International Conference of Agricultural Economists, Tokyo, Japan, August 24, 1991.

Whittaker, Gerald W. "Are Government Payments to Farmers Evenly Distributed?" Unpublished manuscript. Washington, DC: USDA ERS, 1992.

THE STATUS OF AGRICULTURE IN 1993

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It is becoming increasingly clear that agriculture and rural America are separating, that at least in the minds of many policy analysts and public officials, whither agriculture no longer determines whither rural America. It has almost become fashionable to observe sophistically that "agriculture-dependent counties" represent a small minority of rural America.

The point is usually made politically. Agriculture has dominated rural politics—really, has denied rural policy a place at the table. The advocates for rural America want liberation from the good ol' boys and agrarian fundamentalists who run the farm programs and drown out any talk of the rural poor or rural business or the rural community.

I understand this resentment toward agriculture. And because I understand it, I want to do something about it. To do something about it, however, you cannot ignore it. You have to critique it and respond to its flaws. American agriculture in the latter stages of the twentieth century has serious problems. I want to address those in the limited space available here, leaving other important rural topics to others.

Major Problem Areas

I summarize five major problem areas quickly, then turn to some policy issues that relate to them:

Export Dependence

The chimera of salvation by export still haunts U.S. agriculture. From Shays' Rebellion and the Whiskey Rebellion until this day, American farmers have been persuaded to believe in the export market as the solution to their financial problems. In fact, it has been primarily growth in domestic food expenditures that has given U.S. agriculture most of its good times. Export markets have proven fickle, volatile, low priced and highly elastic. Commodity programs have encouraged specialization in many of the crops most vulnerable to export disruptions. And from the time we have shipped maple sugar on back hauling slave trade boats, the export market has never been as moral as we have told ourselves. It is not to feed the world, it is to make a buck, no matter the consequences for people in the developing world.

Diminished Opportunity

The decline in the number of farmers in the 1980s was more the product of reduced entry than it was of accelerated exit from farming by those forced out or retiring. The victims of the farm crisis were not only those whose farms were lost, but those whose dreams were lost; it was not only family farmers who were diminished, but family farm*ing* as an institution. As a result, American agriculture is aging. Today, there are twice as many farmers over age 65 as there are under age 35. In Nebraska, the number of farmers under age 25 fell by 43 percent between 1978 and 1987, while the number over age 65 *increased* by 16 percent. The latter group increased their land holdings by more than 40 percent as well, as land they sold on contract to younger farmers was returned under duress, and as those older farmers with substantial equity picked up bargains at the bottom of the land market beginning in 1986. Today, active farmers over age 65 farm one-fifth of Nebraska. National figures are similar.

Industrial Structure

The quest for convenience, portion control and reduced dietary fat has pushed the meat industry toward a regimented, quality-controlled consumer product. The revolution that took place in poultry production in the 1960s and 1970s is well underway in pork and will soon follow in beef. The changes in pork production are based on new genetics and systems technology in pork production facilities. These changes are encouraging large-scale production and vertical arrangements (primarily contracts) that resemble franchising, in which producers provide labor and facilities in return for pigs, feed, medication and a prescribed management system. A University of Missouri survey concludes that about 16 percent of hogs marketed in 1991 were sold by contractors. Until recently, most of these contracts were between large, independent contractors and smaller grower-producers. Recently, large packers, especially those locating in new pork-producing regions, like Seaboard Corp. in Oklahoma and Smithfield Foods in North Carolina, have established major contract arrangements in order to assure supplies for large new packing plants and some of the large independent contractors like Tyson's Foods and Premium Standard Farms have entered the packing industry. The principal structural changes that follow are 1) loss of open markets for independent producers, 2) greatly increased concentration in production and processing, and 3) diminished access to new technology.

Privatization of Science

If much of the new genetic and management technology is produced in the private sector, it is also kept there either for use by the innovator or for exclusive licensing to large agribusinesses that share it only with their subordinates. This is true, not only in the livestock sector, but in all areas touched by biotechnology. The legal and institutional changes making it possible to patent life forms have provided a profit motive to agricultural science that has rarely existed. The principal threat to the public interest rests not so much in the possible diminution of public agricultural science (such as less funding), but in the potential corruption of public agricultural science as scientists seek both the security of life in public institutions and the reward of profit in service to industry.

Resource Conservation and Sustainable Agriculture

One of the refreshing trends has been the awakened concern about resource conservation and environmental protection. True, some of it is forced by society onto reluctant farmers, but there is a growing segment of American agriculture that recognizes farmers are on the front line of exposure to environmental health risks associated with some modern farming practices and that realizes farmers have used some purchased inputs excessively. In Iowa, farmers have reduced per-acre application of nitrogen fertilizer on corn by 19 percent in five years without any loss of yield. The result: an estimated $40 million per year improvement in net farm income. In short, many farmers are finding out that efficiency can be improved by reducing inputs rather than increasing them. Sustainable agriculture thus builds on both environmental and economic foundations, and interest in it is growing.

Policy Issues

These trends provoke many policy issues, some of which are briefly summarized here.

The Rehabilitation of Farm Programs

Farm programs do not accomplish many of their stated objectives and they are increasingly an embarrassment of special privilege legislation. A handful of large, well-off farms specializing in some of the most resource-intensive crops reap a disproportionate share of the benefits, while smaller farms and especially those with resource-conserving crop rotations are comparatively disadvantaged by the structure of the farm payments.

Worse, because the larger farms have so much political clout, they weigh in heavily to protect their privileges at the expense of other farmers when budget cuts are imminent. This spectacle of a privileged few bellying up to the federal trough in hard times in order to receive subsidies for doing a disproportionate share of the environmental damage cannot continue.

At minimum, program benefits have to be targeted to the family-sized farmers whom the public continues to believe should receive federal assistance, and more of the benefits have to be tied to environmental performance.

Best targeting options:

1) Eliminate the "three-entity rule" that allows large farms to artificially subdivide in order to receive multiple payments and effectively double the maximum payment they are allowed.

2) Establish a "graduated flex acre" program. Flex acres are the portion of a farm's crop base on which any crop can be planted and harvested, but on which no payment is received. Under the "graduated" approach, the portion of base allocated to flex acres would be lower on a farm's first portion of production (say, 40,000 bushels of corn), then higher on subsequent portions.

On the environmental front, an environmental reserve should be established through which farmers receive diversion payments in return for reducing production through "green" practices, such as restoring wetlands, planting grass strips on contours and along waterways, reducing yield goals by reduced fertilizer and chemical application, and establishing crop rotations that include resource conserving and soil building crops. The reserve could be partially funded with money saved by the stricter targeting suggestions above.

Also, it is crucial that conservation and production goals, currently in tension with the commodity programs, be harmonized. A great opportunity exists on this front in the expiration of the Conservation Reserve Program. More than 36 million acres of highly-erodible land have been removed in whole-field (and sometimes whole-farm) blocks at an average cost to the government of $50 per acre. The benefits of this program might be extended to more acreage at much less cost if some land could be re-enrolled on longer-term contracts (twenty-five years or more) under *partial-field* enrollments. This way, grass waterways, field windbreaks, grass buffers and filter strips would provide conservation benefits, not only to enrolled acres, but to adjacent cropped land as well. Cost per acre benefitted would be much less.

Finally, it is vital that the Integrated Farm Management Program Option (IFMPO) established in the 1990 farm bill be strengthened and effectively implemented. Under IFMPO, farmers can plant and harvest resource-conserving crops on base acres without losing deficiency payments on those acres and without losing base in future years. It was adopted in order to remove some of the program penalties now faced by farmers who use crop rotations, but it has been thwarted by administrative indifference and sometimes insubordination.

Role of Public Credit

Congress went a long way in 1992 toward restoring the integrity and historic mission of the Farmers Home Administration (FmHA). That mission was to serve as lender of last resort providing modest levels of credit to capable farmers who could not get credit elsewhere but who, with supervised credit assistance, could graduate into commercial credit within a few years. Over the decades, FmHA became the lender of least resistance to rapidly expanding farms and, especially in times of financial stress, was called on to be every farmer's distress lender. Overwhelmingly, the much-publicized delinquency in FmHA's portfolio has been among the larger farms that were not part of the agency's historic mission, but who were forced on the agency by a Congress and several administrations eager to quiet concerns in the financial community about farm failures.

In 1992, Congress passed legislation providing a priority for beginning farmers in the sale of inventory farmland acquired by FmHA in the debt settlement process with other farmers, and enacted the Agricultural Credit Improvement Act establishing the first credit program aimed at leveraging private capital to help beginning farmers. With most commercial lenders requiring 40 percent or more down payment, beginning farmers have not been able to compete for farmland even in the relatively low market prices of the late 1980s and early 1990s.

Under FmHA's new program, beginning farmers who can muster a 10 percent down payment can receive a low-interest loan for ten years for another 30 percent of the purchase price—enough to establish commercial credit. At the reduced interest rate, the level of assistance actually provided the farmer under this approach is greater than the assistance traditionally provided when FmHA makes loans on 100 percent of the purchase price on a thirty-year note at interest rates equal to the cost of money to the government. The new approach spreads the money among more farmers, costs less per farmer assisted, provides more financial help and leverages the private market.

The program only lacks vigorous implementation, but with the Clinton administration preoccupied at this time with plans to reorganize the U.S. Department of Agriculture (USDA), it seems unlikely to get it soon.

Market Access

The blessings of a market system are only realized if there are markets available to all competitors. The gravest threat to the future of the family farming system is the loss of markets, especially livestock markets long vital to the entry of new producers. The new market structures and institutional arrangements emerging in the pork industry call for a new generation of anti-trust policy designed to maintain competition.

First, Justice Department guidelines need to be updated to give full effect to the intent of the Clayton Act, intended to prevent concentration by horizontal mergers before they are accomplished—to "nip the weed in the seed" as the framers of that act put it. Current guidelines call for little or no action unless the Herfindahl Index (the sum of the squares of the market shares of all firms in an industry) exceeds 1,800, and even these guidelines have been liberally ignored on the excuse that alleged increases in economies of scale justify concentration. But the logical extension of that argument is that the industry ought to be nationalized, a fate no one wants to see.

Second, we need new policy toward vertical arrangements as they relate to competition. It is clear that some of these arrangements threaten access to markets for independent producers.

An important precedent may be a case involving a contract dispute between Allied Grape Growers, a producer cooperative, and Heublein, a wine and liquor manufacturer. The two entered into a complex joint venture in which Allied agreed to supply grapes to Heublein. When the deal soured, Allied sued and Heublein answered that the contract was no good because it violated anti-trust laws.

The court agreed. Under the contract, which only Allied could break, Allied supplied an average of 24.2 percent of the grapes in five California regional markets. This foreclosed a substantial share of the market to other producers and placed Allied in a position to control market prices. The arrangement violated both Section 3 of the Clayton Act (prohibiting exclusive dealing and tying contracts) and Section 1 of the Sherman Act (outlawing contracts in restraint of trade (Mueller, undated).

Third, the relevant market for enforcing anti-trust laws in the livestock sector is the local or regional market, since most cattle and hogs are slaughtered within 200 miles of where they are produced. Until now, most Justice Department actions have been premised on national market concentration levels, hardly relevant to a pork producer or cattleman who, on a good day, can only get two local bids for his product.

And, finally, if packers are offering different prices to different producers for products of like quality, they may be guilty of price discrimination unless they can show that the price differences are due to real differences in procurement costs, or are offered only to compete with other packers, or do not adversely affect competition.

There has not been much anti-trust action in the area of price discrimination lately and it needs to be revisited as a policy issue.

New Public Agricultural Science Mission

In the 1970s, a series of extension publications mused quietly over whether there would be a need for public research and extension if agriculture became highly concentrated. There is no need to muse anymore. The answer is plain to see for all but the innately naive: "No."

In the age of private agricultural science, there is a need to redefine the mission of the land grant university system. At least partly, that mission has been redefined by Congress to include sustainable agriculture.

The 1990 farm bill set out six national purposes for federally-funded agricultural research which includes: "enhance the environment and the natural resource base upon which a sustainable agricultural economy depends."

Of course, the Sustainable Agriculture Research and Education (SARE) program carries the banner of this purpose, but, importantly, the National Research Initiative (NRI), with its far heftier budget, is mandated to emphasize sustainable agriculture as well, and to direct at least 20 percent of its funds into "mission-linked systems research."

Extension has been included in the sustainable agriculture mission but, unfortunately, not in the budget.

More funding is needed for sustainable agriculture in both research and extension. It could be that a more people-centered agriculture is the only real hope for public agricultural science in an era of increasing privatization of science.

Role of U.S. Farmer in World Food System

There is less than meets the eye to free trade. In the past ten years, the developed nations have waxed eloquent about the theoretical virtues of free markets, especially in agriculture. When oil-exporting developing nations from Nigeria to Mexico suffered financial hardships in the oil glut of the 1980s, they built up unmanageable debts. Multinational banking institutions responded by forcing them to devalue their currency as part of an austerity campaign, making food imports more expensive and exports cheaper, hence improving their balance of trade and, with it, their ability to repay loans to the developed world. Sure it was hard on the poor, but it paid the note.

Meantime, the developed world was fast apace engaging in its own dirty little agricultural trade wars, lifting border prices, extending export subsidies, increasing quotas, building walls against imports and greasing the export chutes. All the time we lectured pietistically about free trade and used our financial might to impose it on debt-ridden nations, we raised barriers on our own markets and dumped our surpluses on other markets. Free trade is theoretically pure, but practically speaking, it has always been something the rich force on the poor.

The General Agreement on Tariffs and Trade (GATT) may be culminated in the next few months and it will include an agricultural agreement, but it will accomplish relatively little in breaking down the trade hypocrisy of the developed nations of Japan, Europe and the United States.

The North American Free Trade Agreement (NAFTA), on the other hand, simply furthers policies already underway in both Mexico and the United States to integrate the two economies, especially agriculturally. Mexico has steadily opened its markets to America, going so far as to amend its constitution to allow land acquisition by foreigners and to permit holders of communal plots (called "ejidos") to alienate their holdings, which date to the Mexican Revolution. As a result, ejidos are rapidly privatizing and consolidating, many under the auspices of joint ventures with U.S. investors. Some who oppose NAFTA on the grounds that it will devastate the peasantry of Mexico have not looked lately. They are being devastated anyway. NAFTA merely institutionalizes and accelerates a process well underway.

But NAFTA also holds some promise for a more responsible kind of free trade. The side accords negotiated to appease labor and environmental movements primarily in the United States contain some unprecedented provisions to mitigate the potential damage done to communities as a result of trade liberalization. Most careful observers agree the agreements do not go far enough to give teeth to the regulatory dog or freedom to the politically oppressed in Mexico (the right to sue for minimum wages is an empty right if they can throw you in jail and throw away the key). Whether they go far enough to persuade a majority of the United States Senate to ratify the treaty is another matter.

But there clearly could have been more here, especially in the form of a North American Development Bank funded by border taxes and authorized to engage in broad development efforts on both sides of the border to help displaced people and battered communities. From the beginning of its own economic integration, Europe recognized the need to balance the equities between the rich and poor regions it was trying to integrate. And Europe has been moderately successful at it, but with a top-to-bottom income gap only about one-third the size of the gap between per capita incomes in the United States and Mexico.

Absent development efforts to balance growth and mitigate damages to communities, it is clear that apologies from economists notwithstanding, capital and jobs will move south to the border areas and the cities, while commodities and products move north. It will not be much different for agriculture. Under USDA's most optimistic projection, U.S. feed grain exports under NAFTA are likely to increase by an amount equal to no more than one percent of our annual production (U.S. Department of Agriculture, 1992). But, according to the International Trade Commission, as many as 2,000,000 peasants may be displaced from agriculture. It is better than maple sugar for slaves, but not a lot.

REFERENCES

Mueller, Willard F. *The Allied-Heublein Joint Venture*. Madison, WI: Agricultural Cooperative Extension Service and College of Agriculture and Life Sciences, University of Wisconsin-Madison, undated.

U.S. Department of Agriculture. *Agriculture in a North American Free Trade Agreement*. Washington, DC: No issuing office listed, 1992.

A LEGISLATIVE PERSPECTIVE ON CURRENT AND FUTURE CHANGES IN U.S. FARM POLICY

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As of this writing, Congress can claim two significant agricultural legislative accomplishments: the Omnibus Reconciliation Act of 1993 (OBRA) and the Emergency Supplemental Appropriations Act of 1993. Also nearly finished is agriculture appropriations legislation for fiscal year 1994.

The first legislative accomplishment, OBRA, is a combination of spending reductions and tax increases designed to reduce the federal deficit nearly half a trillion dollars from fiscal year 1994 to fiscal year 1998. Of that amount, a projected $3 billion is to be saved from agriculture commodity, conservation and crop insurance programs.

There is criticism from some quarters that half of the $3 billion reduction will not be realized as true expenditure reduction. Critics argue that some measures related to crop acreage reduction program levels are specific to conditions in the Congressional Budget Office baseline, which are unlikely to be realized and, consequently, will not result in any savings. Other legislated reductions require the administration to make program changes within its discretionary authority and that it already announced prior to the drafting of legislation. Requirements to reduce excess losses in the Federal Crop Insurance program are cited as an example of changes the administration had already announced. It is also argued that changes in the timing of outlays, such as the requirement to repay soybean loans within the same fiscal year they were originated, do not truly reduce government costs.

The second significant piece of legislation, the Emergency Supplemental Appropriations Act (Supplemental), reflects the president's request to provide emergency flood relief to the Midwestern states. Nearly $2.7 billion in disaster assistance is available to farmers incurring crop losses resulting from 1993 disasters. The cost may well exceed the $2.7 billion estimate, however. The Senate struck the required 50 percent proration of payments which were authorized in the 1990 farm bill. Moreover, there is no absolute limit on total payments because the Supplemental requires the use of Commodity Credit Corporation funds should demands for disaster assistance exceed $2.7 billion. Finally, the Supplemental has been designated as an emergency requirement, thus exempting it from provisions of the 1990 Budget Enforcement Act that would otherwise require offsetting reductions in other appropriations.

The agriculture appropriations bill, in conference report form, awaits Senate action, having passed the House in early August. Some changes may still occur in Senate deliberation, but the $71 billion of budget authority is not likely to change significantly.

How do the events thus far in this congressional session suggest agriculture will fare in the future? It is still too early to draw specific conclusions, but some themes begin to emerge. The Clinton administration has not revealed itself clearly with regard to agriculture, but it does not appear to have the ideological bent against government involvement in agriculture demonstrated by the first Reagan administration and, to a degree, the Bush administration.

The Clinton presidential campaign had endorsed the 1990 farm bill policies but questioned their implementation. Some reductions in agriculture spending, proposed as part of the administration's economic program, seem to echo previous Reagan-Bush proposals. These include increased user-fees, federal crop insurance program reforms, reduction in rural electrification subsidies, and reduced payment acres for income support payments to farmers. Some policies, such as "means-testing" farm program payment eligibility based on off-farm income, suggest a populist inclination to target assistance to some notion of "small" farmers. Proposals for increased rural development program expenditures also reflect a desire to "invest" in the economically deprived. The administration's request for a disaster relief supplemental appropriations bill underscores a desire to help those clearly in need. These inclinations may be repeated in Clinton farm bill proposals in 1995.

Despite the conservative nature of the proposals to reduce agriculture spending, the total cuts, $7 billion in mandatory spending over five years, was less than a third of the $22 billion proposed by President Bush in his 1990 budget submission for fiscal 1991. The $3 billion reduction in farm spending in 1993 OBRA was less than a quarter of the $13.6 billion reduction in 1990 OBRA even though both bills were projected, over a five-year span, to reduce future deficits nearly $500 billion, of which about $100 million were attributed to gross reductions in mandatory spending programs.

For the moment, pressures to change agriculture appear to come from directions other than the budget reconciliation process as they have since 1981. The agriculture appropriations bill awaiting final approval illustrates this. It seeks reforms or reductions in programs that have come under criticism such as federal crop insurance, the Market Promotion Program, and restrictions on export promotion of tobacco and on funding of Women, Infants and Children clinics that do not prohibit smoking and on school lunch programs that require offering whole fluid milk. Also debated was the elimination of fiscal 1994 funding for the honey program.

Other reductions, such as the limitation of annual enrollment in the Wetlands Reserve Program to 50,000 acres, were made to provide additional funding to other Appropriations Committee priorities. These reductions were considered necessary because of the budget caps, continued in the 1993 OBRA, that froze appropriations spending at, or below, the fiscal 1993 level. This is a trend that will likely continue in the future as capped appropriations spending will force programs to compete just to maintain their real 1994 spending levels. Even greater competition will come from "investment" initiatives announced by President Clinton as part of his economic program.

Further changes to agriculture will be proposed in the Clinton administration's National Performance Review as part of the effort to "reinvent government." The introduction already made contains proposals to transfer the Food Safety Inspection Service from the U.S. Department of Agriculture (USDA), to the Food and Drug Administration, eliminate the wool, mohair and honey programs, and close and consolidate USDA agency field offices.

Perhaps the most noteworthy aspect of these developments from a legislative perspective is their drifting from the legislative jurisdiction and vehicles over which the Agriculture Committees have primary control. In the past, a multi-year farm bill has been the venue for debate and votes on such issues. Today, we see the debate happening in the Appropriations Committee and, in the case of reinventing government, before committees concerned with government operations and other jurisdiction. That means not only less control over legislation and floor rules governing that legislation, but also repeated votes on issues. The honey program, for instance, will not only have been debated and voted on three or four times this year as part of OBRA and appropriations bills, it will still face legislation under the National Performance Review proposals.

Trade issues, principally the North American Free Trade Agreement (NAFTA) and trade liberalization under the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), hold the promise of net benefits for American agriculture. It is unclear when implementing legislation will appear before Congress, however. While the administration has a NAFTA agreement in hand, it faces daunting opposition in the House. Majority Whip David Bonior has said he thinks three-quarters of House Democrats will oppose NAFTA. This makes its passage questionable at best.

The trade agreement in GATT has yet to be concluded in spite of the expiration of the congressional fast track resolution in December of this year. Though the focus of negotiations has shifted to non-agricultural issues, because of the Blair House agreement between the United

States and the European Community, the new French government is making declarations that seek to undermine the Blair House accord and may be eliciting German support for their position.

Of interest is the possible interaction of NAFTA and GATT. There is no requirement that NAFTA legislation be taken up before GATT, but its defeat would appear to have a most deleterious effect on GATT negotiations, shoring up the French position to undermine the Blair House accord. It appears some of the agricultural NAFTA opposition may be more anti-GATT in nature—such as that of some farm commodity interests to Section 22 quota protection—with hope that a defeat of NAFTA would lead to a failure in the GATT negotiations. All this suggests the legislative outlook, both strategy and outcome, is unclear, which is unfortunate because it may be agriculture's best legislative initiative for some time.

There is some good news on the regulatory front. The Clinton administration has released a policy statement on wetlands protection. Regarding agriculture, the statement announces that recently completed agency rule making will assure that about 53 million acres of prior converted cropland will not be subject to regulation under Section 404 of the Clean Water Act. In addition, the statement designates USDA's Soil Conservation Service (SCS) the lead agency on wetland delineations for agricultural lands and provides that SCS and other involved agencies will use the same procedures to delineate wetlands.

In a similar spirit for pesticide legislation, the Clinton administration has indicated it will propose food safety legislative alternatives to the Delaney clause, a 1950s provision of law that requires the presence of no carcinogenic agents. This is particularly important since courts have held that Delaney is an absolute standard, overturning the *de minimus* standard for pesticide residue that has been used for some time. Such a court ruling threatened the use of many currently registered pesticides.

For the longer term, we must look to the 1995 farm bill. As stated earlier, a Clinton farm bill might have a structure similar to the 1990 farm bill, with populist overtones. Though the president's farm policy may seek to preserve a large measure of the budget resources for farmers, larger budget policy concerns may not permit this.

The Congressional Budget Office (CBO) has just released the August update of its 1994 budget outlook. Taking account of the recently passed OBRA and recent macroeconomic changes, the CBO projects the deficit to decline from $266 billion in fiscal 1993 to $190 billion in fiscal 1996 and then to increase to $360 billion by fiscal 2003. More importantly, the deficit increases its share of Gross Domestic Product every year, from 2.5 percent in 1998 to 3.6 percent in 2003. This is largely the result of double digit growth rates in Medicare and Medicaid, the only major spending categories to increase faster than growth in the economy.

These projections suggest that more budget cuts face Congress before the deficit ceases to be an economic problem. The analysis of the deficit's increase, growth in health care program spending, suggests at which area the reductions might be best directed, but it is questionable if this will happen. The Clinton administration health care reform proposals are expected to increase access to health insurance and health care. Health care reform, when finally passed, may further reduce the Medicare and Medicaid spending levels, but it will unlikely alter the cost structure of providing health care, at least over the next five years. Consequently, in 1995, the Clinton administration and Congress may feel the need to further reduce entitlement spending. To attempt to stem the growth, additional cuts in health care programs may be in order, but other entitlement programs will not go unscathed.

Congressional budget committees will not likely focus on popular health care programs only. They will likely seek significant reductions in other entitlement programs such as agriculture, veterans, or federal retirement, even though these programs represent 2 percent, 5 percent and 22 percent, respectively, of 1998 health care program outlays. Agriculture, with two million farmers, may have the smallest constituency of these three, and budget committees may remember that agriculture took only a $3 billion reduction in the 1993 OBRA. If they believe only half were true program reductions, and recall the $2.7 billion in disaster assistance, budget committees may seek reductions in agriculture similar to the 25 percent of projected spending obtained in the 1990 OBRA.

Reductions of this magnitude may lead agriculture committees back to reductions in payment acres, the most obvious means to reduce deficiency payments, which are the bulk of annual commodity program outlays. New approaches also may receive consideration. One alternative might be to convert income support payments into some form of conservation/environmental payments made for compliance with so-called sustainable cultivation practices. These payments would not in themselves reduce expenditures, but would broaden the political constituency for payment to farmers. Revenue insurance, in one form or another, may be considered as a policy that could reduce commodity program spending while providing producers a means to manage risk associated with crop loss and macroeconomic factors that have affected farm income beyond the reach of traditional farm programs.

Pressure for legislative changes will continue to confront agriculture on several new fronts. The question for agricultural interests and policymakers is whether they will look forward, and adapt, to changes or resist and fight rearguard battles, perhaps dissipating the government resources available to agriculture.

FARM GROUP PERSPECTIVE ON U.S. FARM POLICY

Harry Bell
American Farm Bureau Federation

Keeping rural America vibrant and vital is essential to Farm Bureau. Our members, four million families strong, live and earn their livelihood primarily in rural areas.

The preceding speakers presented some of the numerical, statistical demographics of rural America. America's farmers and ranchers *are* those demographics. We are the people and the economy, at least a significant portion.

The nation's attention this year has been drawn to rural America as a result of natural disasters. Nightly television news showed farm houses ripped from their foundations by raging floodwaters and dust billowing around a farmer's feet as he walked the rows of his dehydrated crop. These and similar scenes evoked sympathy. Rural people are grateful for the aid and assistance they have received so far. But the need will continue after the television spotlights fade.

Disaster programs implemented by the federal government are in place. The programs and regulations must be handled with common sense and compassion. A tremendous job of rebuilding and restructuring faces rural inhabitants. We need a helping hand, not a heavy hand, from government.

In the Midwest, more than one thousand levees were breached. Millions of acres were flooded. Now, with the water receding, some pools remain.

Farmers want to get back to their farming. Some outside of agriculture have already suggested that many of the levees should not be rebuilt. They want the flooded land left alone. Some even want the flooded land classified as wetlands since there has been water standing on it for more than two weeks. Most have not mentioned compensating the landowners involved. The federal government is said to be considering a buy-out of landowners as a lower cost alternative to rebuilding the levees. That's still talk, though.

Temporary assistance programs for flood and drought sufferers alike are already in place and helping those who need it. And we in rural America are grateful. As we look to rebuild and improve rural America, rural development will be a policy catchall for many voices. Many will be well-meaning, many will be self-serving.

I expect the term "rural development" will be heard loudly and often as we write the next farm bill. The 1995 farm bill will do much more than set prices. Interests outside and inside agriculture will load the legislation with measures that address food safety, land use planning, wealth redistribution, conservation practices, government spending and trade.

Who will be involved? Everyone who wants to further their particular point of view. Of course, there is the administration. President Clinton was elected to control spending and reduce the deficit. I still want to believe he will try. But I also see he tends to be influenced by the last interest group that talks with him and he certainly tries to arrange compromises with all concerned.

Secretary Espy, as our administration point man, has his particular belief that farm programs should address and enhance rural development. We believe he is dedicated to serving production agriculture, but he has a track record of yielding to pressures from social planners. There are many other new appointees, as well as those yet to be named to fill open positions in the department, who will play a role. Others who will control the legislation are, of course, those who will write it and vote on it—our legislators and their staffs. This is a new Congress—25 percent of the House of Representatives and 14 percent of the Senate were not there the last time a farm bill was written. We have an opportunity with our old friends and this new blood.

Environmental and consumer groups will seek to play a large role in the discussions. They are already planning for it. There is no question, no doubt in my mind, that environmental groups will seek to further erode our property rights in the next farm bill. They will use the farm bill to mandate their brand of politically correct agriculture.

It is getting to the point that farmers may soon question the value of the farm program. The University of Missouri estimates that, with declining base yields, flex acres and other modifications, farm program participation is worth as little as $10 an acre to a corn grower and $20 an acre to a wheat grower. That may not be enough to cause some producers to stand in line at the Agricultural Stabilization and Conservation Service (ASCS) or to jump through the regulatory hoops those outside agriculture are imposing.

Politicians and special interest lobbyists will not be the only ones seeking to influence farm legislation. Within agriculture we will see various factions operating. Those who do not participate in farm programs will look to protect their interests, and there will be the continuing big farmer versus small farmer debate, with more lower-income producers adding their voices. In-fighting among commodities probably will not be much different than what we have gone through in the past.

Because of the direction of our opponents' interests, we will be engaged in debates over food safety, chemical use, biotechnology and food costs. We will talk about conservation, sustainability and research for alternative crops, and alternative uses of traditional crops. Farm Bureau, following the policy guidelines established by farmers, will work to maximize our ability to farm and make a profit.

I want to make one more observation about the future of rural America, one much closer to home. To look at our future, let us look at the recent past.

The American Farm Bureau Federation (AFBF) was founded in 1919. Farm Bureau owes its founding to the land grant system's Extension Service. Early on, many state legislatures required that a county have a Farm Bureau before an extension agent could be hired. The idea was that, with an organized Farm Bureau present, the agent would have a ready audience of local farmers handy. The latest information on agriculture and improvements for rural living could then be carried from the university to the farmer by the agent.

The system worked extremely well. Eventually, farmers wanted to do more through their Farm Bureau. They wanted to form co-ops, lobby for legislation and speak out on civic issues. Farmers wanted their organization to be a moderating voice for all aspects of agriculture. So the direct tie between Farm Bureau and land grant universities was cut.

Yet, there is still a close connection, a very close bond. We are proud of our ag schools and our extension system. But farmers fear we are losing our agriculture professionals, that extension services are drifting away from the original purpose. Traditionally, academic work paid for by the public focused on teaching and research that fostered growth. Today, many in agriculture feel the direction, the scope and the goals of extension and university research are changing. We see and hear all too often of a change in direction, a change cited as necessary to build an urban constituency. This is done with the idea that funding will be more easily accomplished or justified.

We think we see the land grant system joining the urban migration. Rightly or wrongly, this is a common perception out in the country. Why do we believe this? Some examples:

- We see federal funding to the land grant system increasingly directed into non production-oriented areas.
- We see tax-supported research projects awarded on the basis of political fads.
- We hear of research results being suppressed because the results are not what were expected. Projects conducted in Iowa and

Texas were both terminated without publication because expected levels of agricultural chemical contamination in run-off and groundwater did not materialize. Research procedures were not questioned but the results were. Sound science took a back seat to the political urge for environmental correctness.

- Just as bad, much of the available research money is now being spent on projects that verify and defend conventional agricultural practices. Most of these practices were developed and disseminated by the Extension Service in the first place. Now we must defend best management practices from baseless charges made by those with far less knowledge. This takes time and money that could be put to far better uses. Since research dollars are always in limited supply, farmers would like more say in what projects are undertaken.
- In Farm Bureau we are increasingly learning that if we want answers from the scientific community, we are expected to authorize and pay for a special study. Farmers need answers if agriculture is to have a role in any public policy debate. Whether the issue is pesticide residue tolerances, rural health care and cost reform, trade barrier reduction, or the impact of restricting chemical use on minor crops—we have had to fund studies to get answers. These are issues of importance to all farmers, to all rural residents and, it could be argued, to all citizens. I think they should have been addressed routinely, rather than as an extra-curricular consulting opportunity.

Farmers fear other developments in the Extension Service as well:

- We see a push toward organic, sustainable agriculture. I think I know what sustainable means, but I also think everyone has their own definition. My definition includes the word "profitable"—because without profit there is no permanence. Some of these project reports on sustainable agriculture ignore profit, and are, therefore, ignored by farm families.
- We can always use improved marketing procedures and techniques.
- We believe there will be tremendous opportunities for farmers through new uses of existing commodities.
- We expect new plant varieties, better integrated pest control measures, innovative machinery and enhanced animal production techniques.
- We need help determining the best management practices we can use, those that accomplish the goals society establishes for agriculture while being environmentally friendly as well.

Many of you in this room can play a major role in maintaining America's agricultural superiority. That is the public policy message from America's farmers to you today—we need your help in developing practical approaches to today's farming challenges. We need your help developing common sense ways to farm better, more economically and environmentally.

Some in government and elsewhere would have us jump from our current method of farming to other methods, untried or unproven. But farming is an evolutionary science and your teachings must accommodate evolutionary change. To be of the greatest help to the farm community, programs must reflect that evolution through a measured, tested approach. Please do not join the rush to embrace the latest fad or prove the popular cause.

Farm Bureau is proud to work with you. We have in the past. We will in the future. You can help provide us with the answers we need so we can give the people of the United States and the world the agricultural production system they need.

Just last month, several heads of agriculture met with the AFBF board of directors. We visit regularly with both land grant school agriculture deans and Extension Service directors. We enjoy the alliance that has developed over the decades. And Farm Bureau is the first group to speak up in defense of higher budgets for our land grant schools.

We have a partnership built on more than seventy-five years of cooperation and mutual respect. Working together to build rural America, our accomplishments will continue to be unparalleled and unequalled anywhere in the world, anytime in history.

An Evolving Public Policy Education

PUBLIC POLICY IN A CHANGING SOCIETY

Otto Doering
Purdue University

The scope of this topic is broad enough to be beyond prediction and almost beyond imagination. It is also questionable whether one close to the topic can comment with dispassion and see the forest for the trees. I remember Jim Watson's criticism of the narrowness of British biologists in the 1950s, especially their non-interest in biochemistry and their tendency to "waste their efforts on useless polemics about the origin of life or how we know that a scientific fact is really correct" (Watson, p. 46). I will try to be different.

I am going to start from the widely held view that there is something wrong with public policy today. I will contrast some different views about what is wrong with public policy (and its formation), identify some major common touchstones of these, look at some historical experience, and then venture a few of my own opinions.

Many believe that citizen democracy is not functioning, representative government has failed, and the primary role of public policy leaders is to reconnect citizens to their political world. But, in assessing any problem, we need to start by asking why we are where we are today—because people are not generally stupid, and there are good reasons why they are doing what they are doing.

Daniel Yankelovich, in his book *Coming to Public Judgment*, assesses the problem as follows: Americans are not worried about their political freedom and their political liberty is not endangered—they take it for granted, and among other things this allows them to focus on their material well-being. What is dangerous is the erosion of participation (p. 1). Implicitly he is also talking about the erosion of the effectiveness of participation. Contrast this with the totalitarianism of both the right and the left which spurred participation to extremes as part of the mechanism of social control. We saw this in Nazi Germany and in 100 percent voter turnouts in Communist countries, but this is not the sort of participation Yankelovich is talking about.

Several factors have led to this erosion of participation (which coincidentally erodes the impact of participation and may lead to a decline in the freedom to participate). His assessment is that "few institutions are devoted to helping the public form considered judgments" (Yankelovich, p. 4). Yankelovich, the quintessential pollster, blames part of this on the opinion polls and the media. He believes opinions expressed at the moment are not the judgments people would actually make. "The quality of public opinion is good when the public accepts responsibility for the *consequences* of its views and poor when the public, for whatever reason, is unprepared to do so" (Yankelovich, p. 24, italics Doering's).

What is important to Yankelovich is a process that gets people to public judgment. This process includes three phases: consciousness raising, working through and resolution. This is none other than our basic public policy education model of problem identification, evaluation (assessing alternatives and their consequences) and choosing a solution (based on facts and values).

One reason such public judgment is short circuited is that the media is not doing its job. He points out that the media does lots of consciousness raising with little attention to alternative solutions and their consequences (the working-through process). The media also falls down in agenda setting—not correctly identifying the problem, i.e., symptoms rather than the problems themselves become the focus. Both of these limit the process of coming to public judgment.

Yankelovich also believes there is a problem with the "Expert-Public" gap. This is especially important during the working through stage. What is the public to think when the experts disagree? Part of this difficulty arises from major differences between expert and public opinion (even when the experts agree!). He summarizes these differences as follows:

Expert Opinion	Public Opinion
An empirical proposition.	A value judgment.
Can be validated.	Cannot be validated.
Personal preferences are set aside.	Personal preferences. are major focus.
Criteria of quality is validity.	Criteria of quality is acceptance of responsibility for one's views.

Many misunderstandings between experts and the public originate in "the differing points of departure each side takes to various issues" (Yankelovich, p. 92). The technocratic view of the world and the difficulties in communication between experts or elites and the public are a major theme for Yankelovich. They figure prominently in the inferred causes of the problem he identifies as "sources of resistance" (Yankelovich, pp. 181-189). These are:

1. A self-centered view of the world.
2. Threats to the status of experts.

3. Modernism as an ingrained philosophy of learning behavior (instrumental rationality and the culture of technical control).
4. The worship of Science.

His view is similar to the kind of skepticism exhibited in the late 1800s by Mark Twain (read *Connecticut Yankee . . .*) and others toward the dominance of technology and the technical elite. There are some interesting messages here for those who consider themselves technical specialists who know what ought to be done.

In summary: the message from Yankelovich is that public opinion on which policy is based today is ill-formed and incompletely formed. What is needed for good public policy is what he calls public judgment. Some of us would see public judgment as the product of a traditional public policy education experience that integrates effective problem identification, consideration of a range of alternatives and their consequences, and the final decision which includes values, facts and an acceptance of the consequences in making the final individual judgment.

Frances Lappe has another view (and describes another part of the public policy elephant) in her book ***Rediscovering America's Values***. She believes we should use our values as guides for the way we decide and conduct policy. My immediate response to that statement is to reflect upon the difficulties Woodrow Wilson brought upon us when he began doing this in the conduct of foreign policy. This leaves me with some disquiet, and a feeling that this may work sometimes, rather than with a ringing endorsement of this approach.

Lappe continues: "We have institutionalized our values, these very institutions are now in trouble, and we have thus lost the strength and freshness of the application of our values (through institutions) to considering appropriate policy." As we read further, it becomes clear Lappe is concerned about some very specific values.

Lappe focuses on the Liberal belief of self-centeredness—the Hobbes and Bentham idea of the basic competitive nature of man which causes real problems when debating or deciding public issues. In the past, this competitive individualism was mitigated by Western religion even though Liberal thought sanctified institutions like private property and the market in a way that further mitigated against useful and productive common decision making. In the Liberal tradition, private property's role was to provide "a source of independence against state power and other individuals." Also, the market did not require any "consensus about community needs while directly expressing individual desires" (Lappe, p. 10).

Lappe not only defines the Liberal (with a capital "L") tradition correctly, but also effectively uses Adam Smith as a counter argument—something to make conservative economists gnash their teeth. She says Smith thought the individual's sense of self worth was embodied entirely within society and that there were external rules above individual human accountability. There is something of a chicken-and-egg difficulty here about priorities and precedence—the individual or the common good.

Lappe wants society to have a sociologist's or cultural anthropologist's view of the world (not realizing that the old cultural anthropology tradition has been ridden out of that profession). A democratic government is not to be just a means to an end, but prized through certain community values in its own right. (What we see here is a "Mr. Smith Goes to Washington" view of democracy). Lappe holds that today, private property and the market should not be institutions just for protecting or enhancing the individual but should become mere "devices subordinated to our socially defined needs" (Lappe, p. 13). Property rights become rights of membership. Adam Smith's broader concept of social justice plays in here as well. What Lappe calls for is a change in the dominant set of traditional Liberal values as a solution for inappropriate policy that is based upon an inappropriate view of the world and an individual's place in it.

Lappe is advocating changing society (societal values) to change policy while Yankelovich is advocating changing the process through which the public expresses its wishes about policy decisions. Is society misinforming policymakers so we have to change the process, or is the nature of today's society such that we have to change it (its values) to get "good" policy? Alternatively, are institutions at fault? I, for one, am certainly not going to answer this question for you!

Typifying the institutional approach, Harry Boyte comments that, "Institutional politics is the practice in most large organizations and in government, it involves a strongly hierarchical structure, a language of rational calculation of individual costs and benefits, and a largely one-way information flow. This is what has left most people in the roles of spectator and political consumer today. *It's what people love to hate*" (Boyte, p. 5, italics Doering's).

Benjamin Barber refines this distinction claiming, "It is almost as if there are two democracies in America: the one defined by national parties and presidential politics and bureaucratic policies, a remote world circumscribed by Washington's beltway, walling in the politicians even as it walls out the citizens; and the other defined by neighborhood and block associations, PTAs and community action groups, an intimate domain no larger than a town or rural county where women and men gather in small groups to adjudicate differences or plan common tasks. With something of a pejorative sneer, we call the first "politics," cynical about the corruption of politicians, skeptical about the competence of voters or about the possibilities of participation in affairs so complex and institutions so bureaucratized. But about the second we wax exuberant, celebrating its spirited good-neighborliness and restless activity, though we scarcely associate it with politics or democracy at all" (Barber, p. xi.).

Clearly there are very different views about what these people see as the basic problem of public policy today. It is fair to ask at this point whether these commentators are addressing symptoms rather than causes. None of them explicitly deal with:

1. The tremendous economic changes since the Second World War, wherein our nation started as *the* dominant economy in the post war period and is now being forced to accept a lesser status.
2. The great changes in demographics over the last generation that include changes in density, age distribution, ethnic composition, and comparative well-being.
3. The demise of the American melting-pot ideal.
4. The critical role of elites in changing or setting societal values. (One would certainly have expected Lappe to focus on this).
5. The rapidly changing view of what is "correct" politically.

There have been a number of extremely important historical changes. Among them are the changes in the nation's economy and shifts in regional power as well as the changing power shifts related to demographics. Our notion of what is "progressive" has changed—it is no longer equated with the populist views of the late nineteenth and early twentieth century.

We have seen the demise of the Victorian-based reforms that shaped what good and appropriate societal activities were for several past generations. These include a further change in the role and place of women today—a further evolution from the Victorian accomplishment of placing women and children in a protected status less subject to physical abuse. We have seen great changes in the expectations for, content of, and quality of education. We have seen changes in the definition of public and private ethics away from the puritanical Victorianism, some of which may have been hypocritical, but some of which fostered accepted behavior, trust and shared ideals between individuals. (This change made the savings and loan scandals possible—and the public does not seem to care that much about it, as long as the costs are paid later!). Finally, we have seen the demise of the folklore of personal honesty, thrift and hard work which served as an important stimulus to productivity and a sense of community responsibility—something Lappe does not take into account when talking almost exclusively about the competitive Liberal tradition. All of these are major factors if we are to try to explain why we are where we are today.

Coupled with this has been a critical change in the basic content of our national policy in America. In the past our national agenda included: the establishment, defense and consolidation of the nation; the settling of the land; and the populist social reform goals to make society better—educating, protecting and giving opportunity to the young and the less fortunate on the one hand and, on the other, attempting to limit the scope of the powerful and wealthy to prevent their taking advantage of their position. All of this took place during a period of growing national wealth and prominence based upon a superb natural resource endowment easily capable of supporting our growing population.

Today, there is no overriding national agenda—little sense of nation building or of building a national culture. There are fewer shared ideals, where previously many opinion setters shared a common agenda including some degree of social responsibility. We face a declining resource base for essential production inputs and pressure on basic life resources like air and water. Most importantly, the critical economic questions being faced today are divisive ones over power, wealth and income distribution. People scramble to get a larger share for themselves with less focus on economic growth for everyone. The compensation for Fortune 500 CEOs has gone from thirty-five times their workers' average pay in the mid-1970s to 143 times in 1992 (*Wall Street Journal*, p. 1). We see fights over major economic stakes in the debate on national health care. Some worry about the distribution of resources going increasingly toward the old rather than the young—others are concerned about the declining attention given to investment in the future which is being sacrificed for current consumption.

All of these are major factors if we are to try to explain why we are where we are today, and many of the commentators on our national dilemma focus instead on merely jiggering the present system to get us somewhere else. Jiggering the system will not have sufficient impact to alter the paths of so many loaded trains that have already gathered speed in other directions.

There have been many basic changes in our society, its make-up, its values, and in the resources available to support it. This will have to lead to changes in the way society decides issues under almost any view of where our society should be going.

The nature and content of current and future public policy is just very different from what it was in the past and will evolve into something different in the future. These new issues are stressful on the decision process in different ways—all of which will require that decisions be made differently from the way they were in the past.

Given this change in society and in the basic nature of the critical public policy issues for society, I would not expect just a process reform such as Yankelovich suggests to meet our public policy decision making needs. I would not expect a sudden shift to Lappe's more socially-based set of values to do the job either. In fact, we already have seen some very important shifts in values—something that does occur as a matter of course in open societies. For example, an important redefinition of property rights has already taken place. In the dispute over the preservation of wetlands, those who own wetlands have lost some of the discretionary rights over their property to the general public that prefers to preserve this resource.

My own bias leads me to believe there may be real value in trying to modify decision-making institutions so national decisions receive more of the attention and participation of the individual as Boyte and Barber suggest. But progress here is not made in a vacuum. We will have to do a better job identifying the changes in society and public policymaking that have already taken place and try to better gauge their impact upon current and future policymaking. This must be part of the definition process of the causes of our current dilemmas—the "why we are where we are today" that should have a logical explanation. If we cannot make this identification, we may be chasing symptoms. If we cannot speak with some accuracy and authority about why we happen to be investing less today in our youth and more in our elderly we are unlikely to provide a good basis for the public to ask if they want to continue in this direction or change to another path.

Tim Wallace pointed out in our discussion that change is made at the periphery (the local level, the more modest decision), and that we do accomplish a great deal by aiding this process. I agree with this, but believe we need to try to keep a broader focus to ensure that we deal with core societal issues and also with the question of more effective consideration of public policy issues determined at the center of government.

Jerry Howe raised the critical question of institutional change—not only for decision making but also for implementing new policies. If our changing society makes a new policy shouldn't we pay attention that institutions also change to make that new policy happen? The answer is certainly yes.

Both of these are important considerations. I would add that I am not sure exactly what direction the public policy process or public policy education should move in, but we should be moving somewhere different from where we are today. My view is that where we are today still reflects a past that is no longer with us in terms of issues, values, priorities and the decision making process itself.

We must do a better job identifying the major drivers of policy change that operate today and tomorrow, and as part of this process do a better job identifying those issues that are (and will be) relevant to society. This is all the more difficult because we do not have an identified and commonly shared national agenda. We are dealing instead with narrower issues and concerns over which there is not universal agreement. But, this is where we are, and these have to be dealt with.

I am convinced the success of Perot in gaining as large a vote as he did in the 1992 presidential election stems from his focus on issues of concern to the public that were being ignored or not dealt with by the two major parties. Given the megalithic structure of our two national political parties today, they are increasingly less flexible in shedding old concerns and taking on new ones. This inflexibility is part of what Boyte and Barber are talking about. The cost and media structure of the political process we have today give even less opportunity for ventures like Teddy Roosevelt's Bull Moose party. However, it is increased flexibility to take on new public issues and deal with them effectively that will, in my view, be the critical hallmark of how effectively we, as a nation, cope with the future.

REFERENCES

Barber, Benjamin. *Strong Democracy*. Berkeley, CA: University of California Press, 1984.

Boyte, Harry C. "Citizen Politics." *Teaching Politics*. A Project Public Life publication. Minneapolis, MN: Humphrey Institute of Public Affairs, 1991.

Lappe, Frances Moore. *Rediscovering America's Values*. New York, NY: Ballantine Books, 1984.

Watson, James. *The Double Helix*. New York, NY: W.W. Norton & Co., 1984.

Wall Street Journal. "The Road Taken." 18 Aug. 1993, sec. 1, p. 1.

Yankelovich, Daniel. *Coming to Public Judgment: Making Democracy Work in a Complex World*. Syracuse, NY: Syracuse University Press, 1991.

INNOVATIONS IN PUBLIC POLICY EDUCATION

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What is new or different about public policy education compared to five or ten years ago? Here are four things that seem new to me:

First of all, we have richer and more complicated discussions of advocacy. Most of us acknowledge that we advocate for education and for better-informed decisions; many advocate for more participation and for attention to specific issues or concerns; some advocate for particular *types* of solutions—in the form of, for example, "*any* solution as long as it takes environmental consequences into account" (Hahn, Greene and Waterman). We are more likely to admit that bias—speech or behavior that can be interpreted as advocacy—is unavoidable. We pay attention to the argument that learning requires passion and advocacy is more passionate than neutrality. We talk more about balance and fairness—about the need to include, reflect and respect all viewpoints on an issue and the value of aiming for mutual understanding and the search for mutually acceptable solutions.

Some of us still argue that educators should be objective (House), while others insist objectivity has its drawbacks and advocacy has a place in the educator's repertoire (Hite). In either case, we increasingly feel compelled to give reasons for our positions. We bring to more conscious and deliberate attention the choice of which stance we think is more ethical, which one best fulfills our responsibility to the public that pays our salaries, or which one we have reason to believe will be more effective in promoting learning and constructive action on pressing public issues. Those, it seems to me, are the important questions to be thinking and talking about.

The second change I see is that we are getting closer to a genuine merger of content and process. Although I know it's an oversimplification, it has always seemed to me that, historically, public policy educators were long on content—about farm issues and farm policy, for example—while community developers were long on process. We are now getting past that dichotomy. In a recent comparative evaluation of eleven projects funded by the Kellogg Foundation, my colleagues and I noted that projects and people that started with an emphasis on information provision often moved in the direction of increasing attention to dialogue, process assistance, local focus and intensity of interventions (Hahn, Greene and Waterman). Examples: They added discussion groups to conferences and then learned that better discussions occurred when the groups were instructed to come up with policy recommendations. They invested heavily in developing educational materials, but eventually realized that creating dialogue among diverse interests had a bigger impact. They uncovered a more important role for extension at the county level than they appeared to have envisioned at the beginning, and they adopted strategies like offering mini-grants to support local follow-up activity.

In those projects, content specialists frequently identified a critical role for process assistance, made connections with process specialists, and developed their own process skills. Most likely, they also learned a lot about the unique challenges of presenting technical information in the context of public issues. (With the benefit of hindsight, I wish we had made more inquiries about that in our work for Kellogg). I suspect some of the content specialists learned there is no such thing as neutral information—that every piece of information is good news for some parties to an issue and bad news for others—and they may have found the alternatives-and-consequences framework helpful. I would guess they also learned information is most helpful when it addresses questions to which participants in an issue agree they need answers and that it helps when content specialists let people *know that they know* information alone will not resolve the issues. I think we need to make more effort to tap the lessons content specialists have learned and to help them share their lessons with one another.

I need to acknowledge that some of the Kellogg projects also learned about the limits of process—about the need to provide information as well as dialogue in order to rise above the pooling of ignorance. It simply happened that most of the Kellogg-supported projects were led by content specialists whose learning was often in the process direction. I would expect projects led by process specialists to exhibit more learning in the other direction. There is clearly learning that needs to take place in both directions. Process specialists can increase the impact of their own work by refining their ability to connect it with the work of content specialists.

The third change I see is that we are developing a richer and more complicated picture of how educational impact happens. We still know it is sometimes as easy as laying out the issues, the options and the consequences for key policymakers, who then use the knowledge they have gained from us as they make decisions. But we also know that it is sometimes a lot more complicated. What prevents policymakers from acting is often lack of agreement rather than lack of knowledge. They may need help in reaching agreement—or *help in helping their constituents* reach agreement. In still other cases, policymakers are not our primary audience. We may be working with citizens who do not understand the policy process very well at all and who need a lot more than a laying out of the issues, the options and the consequences before we can say the educational process is complete.

To meet these more complicated challenges, we are learning that education needs to begin with people's everyday concerns and the label "policy" can be a turnoff. We are learning that process assistance as well as content is needed—and this includes the educational process as well as the policy process. We need to help people understand policy-making; we need to link our educational interventions to the evolution of the policy process; and we need to be sensitive to how different people and groups learn. We are also learning that a single, one-shot educational event is often not enough—that there needs to be ongoing contact and a sequence of activities in order for education to have an impact on individual learning or on the issues. We are learning—or at least we have a hypothesis—that 1) public policy education for newcomers to the policy process is easiest in the local arena; 2) impact on issues requires some kind of match between the scope of the audience and the scope of the issue (in other words, educating people in Illinois about the *national* farm bill is a worthwhile thing to do, but it is not likely to have much detectable impact on the farm bill, at least in the short run); and, consequently, 3) the valuable goal of helping newcomers have an impact on state or national issues will not be realized without a fairly complex, long-term, multi-level educational strategy.

The fourth change I see is that we are finding better language to talk about our objectives and impacts. When we evaluate our work, we continue to do it most frequently in terms of impact on individual learners. Did their "KASA"—their knowledge, attitudes, skills or aspirations (behavioral intentions)—change? But we are at least as interested in impacts on issues or on the policymaking process. We look for such impacts; we talk about them and take pride in them. Examples from the Kellogg projects (Hahn, Greene and Waterman): "References were made in the governor's rural health strategy meeting to things learned during the project's educational program." "There had been antagonism between two school districts, but they participated together in the project's educational program and are now talking about cooperation." "Creation of the state rural development commission was a direct result of the project's statewide workshop." "Language drafted for the county zoning law incorporated protection of groundwater resources as recommended by project participants." Note that the impacts here are not primarily changes in individuals (though changes at that level are certainly involved), but changes of a more general, or collective, nature in how issues are addressed, talked about or dealt with.

Anecdotal evidence of this sort is easy to find. We simply need to be more systematic in looking for such evidence and recording it. I sometimes wonder if we have done relatively little of this because we are afraid of success. Have we been inhibited from evaluating impacts on issues because reporting them may imply that we have been successful in advocating particular outcomes? Do we worry that asking about impacts on issues might be interpreted as evidence of a desire to influence outcomes in a particular direction? If so, I think the situation is changing. We are beginning to find the language to talk about the impacts we want to have—and to report the impacts we have had—in terms that are publicly defensible. By that, I mean talking not about specific outcomes or influences in particular directions, but about something broader—something that will seem positive to reasonable people on all sides of an issue and especially to the great numbers of citizens who do not like any of the extreme positions. An appropriate measure of success (or failure), for example, might be to document something like *the extent to which we have provided constructive assistance in moving issues toward resolution in ways that reflect the perspectives of policymakers and affected parties on all sides of the issue.*

Such a conception of goals-and-outcome measures brings us closer and closer to the heart of widely-recognized shortcomings in the way politics is practiced in our culture. We have a political system that seems unable to respond effectively to a growing array of public problems. Americans hate politics, according to E. J. Dionne, Jr., because political discourse has become polarized, ideological and unauthentic. Politics has ceased being "a deliberative process through which people [resolve] disputes, [find] remedies and [move] forward" (p. 322). "When Americans watch politics now," Dionne says, " . . . they understand instinctively that [it's] not about finding solutions. It is about discovering postures that offer short-term political benefits" (p. 332).

Interviewers who talk at length with ordinary citizens find they know perfectly well that public issues are complicated (Sanders; Harwood; Gamson; Graber). They know there are no easy answers. They know that compromises and creative problem solving are needed. The fault they find with politics is not that it is too complex, but that it oversimplifies and polarizes and fails to explore the ambiguous gray areas between the extreme positions. Studies relying on qualitative interviews suggest citizens are not apathetic even though they want nothing to do with politics as it is currently practiced (Harwood). They long for a politics they can trust, and, above all, they want solutions that are fair (Sanders; Hochschild). They would like it if things worked out in their favor, but, if forced to choose, they opt for outcomes that are fair for everybody. I know at least two studies that reached that conclusion. In one, in which twenty-six individuals in Utica, New York, were interviewed at length, no less than half of the interviewees mentioned at least one policy they approved even though it hurt them personally (Sanders).

Examples include a tavern owner who favored a higher drinking age, a retired person who favored budget cuts even though his pension would be smaller, and a defense worker who believed defense spending should be cut.

Interviews with policymakers reveal a similar degree of dissatisfaction with politics, but many of them have only limited views of how relationships with citizens could be different (Harwood). Policymakers' interactions with citizens tend to be limited to one-on-one conversations or shouting matches at meetings at which issues have already reached the boiling point. Neither situation lends itself to the development of wide-ranging mutual understanding. Many policymakers see policy-making as a burden that they are not expected to share. They believe they are supposed to have the answers or, if they do not, that it is their job to find them. They envision little possibility of a larger role for citizens.

At least some policymakers, however, appreciate opportunities to get beyond the surface of public opinion and to understand why people hold the views they do (Perry). They like it when citizens have a chance to get a better understanding of issues and see they are not black and white. In a California case reported in the *Journal of Extension*, city officials who were "frustrated by the 'no-win' attitude at public meetings and the lack of community leadership on pressing issues" asked extension to help create a citizen "sounding board" to "analyze important community issues, report potential solutions and their consequences, and make recommendations" (Rilla and Reedy). In New York, a state legislator who had groups on all sides of an issue "yelling" at him asked extension in one of the counties to get industry, environmental, community and legislative representatives together to come up with recommendations for educational or legislative responses. (The issue involved spraying herbicides on utility right-of-ways. It was related to me in a personal conversation). I am sure many of you could cite similar examples.

Evidence like this points to a widely-recognized societal need that is awfully close to what I believe is our evolving understanding of public policy education. Am I in too much of a dream world if I envision extension playing a prominent role in filling this critical niche? Extension is badly in need of a new public image. It has tried to shake a too-narrowly-agricultural image, but, as I see it, has moved in so many different directions it is hard for anyone outside the organization to make sense of it—even those who have great respect for its work. We are evolving a conception and a practice of public policy education that resonates with a widely-recognized societal need, and that conception and practice have the potential to be a common theme woven through every extension program. We have reached a point at which Patrick Boyle, former director of extension in Wisconsin, has called public policy education a "path to political support" and a recent Extension Committee on Organization and

Policy (ECOP) position statement envisions extension in the twenty-first century as "known for benefiting society" through its ability to address controversial issues, facilitate public discourse, provide relevant knowledge and increase the likelihood of collaborative solutions. I think we are getting there. The question is whether we will do so in time.

REFERENCES

Boyle, Patrick G. "Public Policy Education: A Path to Political Support." *Epsilon Sigma Phi Newsletter*, p. 1, p. 3. Fort Collins, CO: Epsilon Sigma Phi, Apr. 1993.

Dionne, E. J., Jr. *Why Americans Hate Politics*. New York, NY: Simon & Schuster, 1991.

Extension Committee on Organization and Policy. "Public Issues Education: The Cooperative Extension System's Role in Addressing Public Issues." Position statement endorsed by the Extension Committee on Organization and Policy. Washington, DC: USDA ES, 1992.

Gamson, William A. *Talking Politics*. New York, NY: Cambridge University Press, 1992.

Graber, Doris A. *Processing the News*, 2nd ed. New York, NY: Longman, 1988.

Hahn, Alan J., Jennifer Greene and Carla Waterman. "W.K. Kellogg Foundation Innovative Public Policy Education Projects Cluster Evaluation Final Report." Unpublished. Ithaca, NY: Dept. of Hum. Serv. Studies, Cornell University, 1992.

Harwood, Richard C. *The Public's Role in the Policy Process: A View from State and Local Policymakers*. Dayton, OH: Kettering Foundation, 1989.

Harwood, Richard C. *Citizens and Politics: A View from Main Street America*. Dayton, OH: Kettering Foundation, 1991.

Hite, James C. "The Case for Advocacy in Extension Public Policy Education." *Increasing Understanding of Public Problems and Policies—1992*, ed. S.A. Halbrook and T.E. Grace, pp. 32-36. Oak Brook, IL: Farm Foundation, 1993.

Hochschild, Jennifer. *What's Fair?* Cambridge, MA: Harvard University Press, 1981.

House, Verne W. "Issues, Alternatives and Consequences." *Increasing Understanding of Public Problems and Policies—1992*, ed. S.A. Halbrook and T.E. Grace, 26-31. Oak Brook, IL: Farm Foundation, 1993.

Perry, Michael J. *Citizens and Policymakers in Community Forums*. Dayton, OH: Kettering Foundation, 1990.

Sanders, Arthur. *Making Sense of Politics*. Ames, IA: Iowa State University Press, 1990.

ALTERNATIVE DISPUTE RESOLUTION APPROACHES TO CONFLICT MANAGEMENT

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For many years, extension public policy educators have placed their faith in the standard alternatives/consequences (A/C) model. Among the variations promoted at the National Public Policy Education Conference for more than four decades, the alternatives/consequences model has at least three common steps: 1) clarify the problem or issue; 2) develop alternatives; and 3) identify consequences of each alternative.

An essential corollary of this A/C model has been the notion of "the teachable moment," defined as an unspecified, but generally short, period of time bounded by: 1) when people are not interested in the issue and 2) when the lines are drawn between fighting parties. In other words, teaching alternatives and consequences will not work very well if people do not pay attention, due to either indifference or intolerance. As so eloquently stated by one of our panelists, "Teachable moments occur when stakeholders are concerned enough about a public issue to participate in an education program, yet not so fervent that they would be unable to accept objective information."

The two plenary presentations by Otto Doering and Alan Hahn raise challenges about innovative public policy education in a changing society. Some fundamental questions include:

- How is the problem defined and by whom?
- How are the alternatives identified and by whom?
- Concerning evaluation of the alternatives, how are the criteria for choice selected and by whom?

I believe these questions raise some serious implications for how extension educators conduct public policy education, with whom and when. As we examine new methods for how to conduct public policy education and with whom, I suggest there is a need and an opportunity to expand the notion of "the teachable moment." In particular, as we are increasingly faced with highly contentious issues that tend to escalate more quickly, the timing dimension of when we can conduct education, and for how long we are able to remain engaged with the audiences and the issue, becomes critical.

We planned these three concurrent workshops on "Skills for Enhancing Education About Public Issues" to address some of these fundamental questions and to explore new methods for enhancing the A/C model. In examining "Alternative Dispute Resolution (ADR): Approaches to Conflict Management," consider the possibility of rethinking the teachable moment. Specifically, by paying closer attention to the elements of "who" and "how," we may be able to stretch out the "when." I suggest a general proposition that "the teachable moment" can be extended by approaches designed to involve the broadest possible spectrum of people affected by the issue in the definition of the problem, in the generation of alternatives, and in the identification of criteria by which they evaluate the alternatives. In this sense, alternative or collaborative dispute resolution can be seen as an enhancement of the alternatives/consequences model rather than a replacement for it.

COLLABORATIVE DISPUTE RESOLUTION PROCESSES

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People are generally better persuaded by the reasons which they have themselves discovered than by those which have come into the minds of others.

—Blaine Pascal

Importance of Collaborative Dispute Resolution

Public Problems in a Democratic Society

In his remarks at the 1992 National Public Policy Education Conference, Michael Briand from the Kettering Foundation discussed public problems in a democratic society. He said there is no single standard, rather multiple perspectives on what is the "public interest."

Shared Power Context. As described by John Bryson and Barbara Crosby, no one institution or organization is in a position to find and implement solutions to the problems that confront us as a society—in other words, no one is in charge! Their book, *Leadership for the Common Good: Tackling Public Problems in a Shared Power World,* sets forth how to think and act more effectively in a shared power context. Dimensions of a shared power context include:

- Increased complexity, uncertainty, turbulence and risk.
- Fragmentation, division and separation.
- Individual versus society—competition versus cooperation.
- Declining capacity to manage and to govern changing role of elected leaders.
- Solutions that can be implemented only when a critical consensus is created and sustained.

Public Decision-Making Trends. In their work on consensual approaches to resolving public disputes, Lawrence Susskind and Jeffrey Cruikshank suggest that this country's public policy process is in the throes of decision-making paralysis when it comes to taking action on important and controversial public issues. Another decision-making trend is new mandates for public participation in 70s/80s (with tools for this evolving).

Emerging Collaborative Leadership Models. An effective public leader will realize that the solution does not lie outside the public but within it. What should be done becomes clear only as members of the community deliberate together. Effective public leaders do not assume the problem is already defined, but solicit a variety of perspectives and seek to integrate them into a new genuine community perspective on the problem. A community leader is one who helps the community find its voice and set its direction.

Goal of Public Policy Education

The goal of public policy education is to increase understanding of public issues and policy, as outlined by Barrows and Danielson.

Collaborative Dispute Resolution Efforts. Over the past decade, dispute resolution processes such as mediation, negotiated rule making and policy dialogues have become more common features upon the public policy landscape at every level of government. These processes, which are sometimes referred to by catch-all titles such as Alternative Dispute Resolution (ADR) or Collaborative Problem Solving (CPS), have been most commonly used on an *ad hoc* basis to resolve conflicts that arise during policymaking or policy implementation. These are structured public learning processes achieved through face-to-face engagement in defining problem(s); generating alternative ways to solve the problem(s); and selecting a solution that addresses the interests, needs and values of the different stakeholders.

Common Roles. Collaborative dispute resolution efforts and public policy education share a focus on the role of convener, promoter of a sound process and neutral process manager.

Collaborative Dispute Resolution Processes

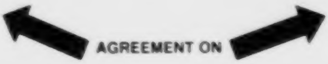
Definition

The traditional use of litigation and administrative and electoral procedures for dispute resolution has not always produced fair and wise solutions. Litigation can be time consuming and expensive. Direct participation, for the most part, is discouraged and communications become distorted. Adversarial relationships make compliance and implementation problematic. Although a winner is declared and a decision is rendered, the dispute may not be resolved and the losing interests may redirect their efforts to block decisions.

Collaborative dispute resolution is a voluntary process that involves many interests in a facilitated—or mediated—face-to-face negotiation. The impartial facilitator, often selected by the participants, assists in defining issues, exploring the parties' mutual interests and those that divide them, generating and assessing options, and reach-

Figure 1. Stages of Consensus-Building Process.

GETTING STARTED	JOINT ANALYSIS	MAKING DECISIONS	DOING IT
See an issue	Mutual education	Create criteria	Present for ratification or adoption
Identify the parties	Create joint knowledge	Apply criteria	Prepare for renegotiation
Make initial contacts	Jointly define issues	Make preliminary choices	Monitor and evaluate
Think it through	Jointly define problems	Test	Celebrate!!
Develop a process	Generate visions and options	Package	
Ground rules			
Logistics		Develop implementation plan	
Timing			
PROCESS	THE PROBLEM	THE SOLUTION	PRODUCT



ing an acceptable solution. The agreements are reached by consensus, not by majority decision (Figure 1). These processes supplement conventional dispute resolution forums, and they are most often initiated when the normal decision-making process has proven ineffective. Building consensus through negotiation may be motivated by a desire to advance a shared vision through an exchange of information or by a need to resolve conflict to produce a joint agreement, or both.

State Dispute Resolution Programs

At least sixteen states have created, or are in the process of creating, statewide offices of dispute resolution or similar entities. The purpose of these offices is to provide and promote the use of new dispute resolution and collaborative decision-making techniques and to help states cooperatively manage, resolve and prevent conflicts that occur within government and between government and the public.

These state dispute resolution programs share a broad mission of bringing new tools and approaches for difficult public policy disputes. Florida is one example, with state centers focused on the public policy area and on the courts.

Florida's CRC

The Florida Growth Management Conflict Resolution Consortium (CRC) brings Floridians together to build collaborative solutions for growth management problems through the use of mediation and other conflict resolution tools.

Based in Florida's state university system, the CRC serves as a publicly-funded, neutral resource for public and private participants in land use, environmental and growth-related conflicts. The CRC offers direct assistance and mediator referral in specific conflicts, help in designing new approaches to handle recurring growth management problems and facilitation of policy development. It provides training and public education on using collaborative approaches and it sponsors documentation and evaluation of these efforts.

Growth Management Context. Growth management in Florida is a legislatively-created system that regulates the amount, timing, location and character of development through comprehensive planning on the local, regional and state level. It is a decision-making process that seeks an acceptable equilibrium between development and environmental conservation; between the demands for public services generated by growth and by the supply of revenues to pay for those demands; and between progress and equity. Reaching and maintaining this equilibrium is an inherently conflictual activity that calls for new collaborative tools and approaches.

A consensus has emerged within Florida's growth management community on the value and need for better approaches to resolving growth-related conflicts. Mediation and facilitation have a special role to play in the implementation of comprehensive plans, in intergovernmental coordination, and in resolving environmental and social problems brought on by rapid growth. In the past, the growth management system directed such conflict to adversarial last-resort forums such as administrative appeals, the courts or the legislature to declare winners and losers. In contrast, the CRC is dedicated to helping parties focus on reconciling their interests through joint problem solving negotiations, often assisted by a mediator or facilitator.

Program Orientation. The CRC serves as a catalyst for helping build a better system for meeting the growing demand for collaborative services with an adequate supply of highly qualified and competent mediators and facilitators. In light of lessons from other contexts, the CRC does not see the development of a public sector mediator corps as the long-term solution to handling increased use of collaborative approaches. However, in the future, many professionals within the public sector will be called upon to assist in designing and facilitating collaborative group processes. Both strengthening the market for mediator/facilitator services and developing greater internal collaborative skills and resources are critical to the ultimate success of this experiment. During the first five years, the CRC has focused on demonstrating collaborative dispute resolution approaches. This has led to greater use and institutionalization of these processes. Over the next five years the CRC will focus on the supply side by improving the quality of mediation services, continuing to demonstrate consensus policy development and helping design appropriate systems for handling recurring disputes.

Casework. Through its involvement in growth management conflicts, the CRC seeks to demonstrate better ways for Floridians to build consensus on growth management issues, solve problems and resolve conflict. Its goals include: resolving or promoting the resolution of growth management disputes through collaborative dispute resolution methods; designing and promoting implementation of collaborative dispute resolution in recurring conflicts; and promoting consensus-based policy development, including legislation, agency rules and local planning and regulation. The CRC manages a referral listing of mediators and facilitators.

Education and Training. The CRC's education efforts seek to fundamentally change the perception of growth management as an inherently combative and adversarial process to one that seeks to solve problems and equitably balance compelling claims through collaborative dispute resolution processes. Its goals include: informing decision makers about the nature, value and appropriate use of collaborative dispute resolution; training professionals representing public and private interests in growth management conflicts in the skills necessary to effectively participate in collaborative dispute resolution; enhancing the practice standards of professional mediators, facilitators and agency staff serving as neutral intervenors through training.

Examples of Applications. Within Florida's growth management context, CRC has assisted in several ways. As an institutional broker, the CRC is a university-based service center promoting the use of collaborative approaches to solving problems. In its service, education and research role, it is involved with research and curriculum efforts in urban planning, public administration, law and communications. CRC has facilitated: large group consensus building on policy (ELMS III); community problem-solving and collaborative planning, by convening a dialogue on balancing economic development with conservation (South Walton County); and mediation of planning and environmental disputes.

Collaborative Dispute Resolution Opportunities

Collaborative dispute resolution processes can be used in extension programs, or other direct service, to facilitate visioning processes for local communities or problem solving on policy problems. In the area of research, these processes can facilitate visioning processes for local communities or problem solving on policy problems. In the area of research, these processes can facilitate research evaluation and documentation, teaching and student involvement in active learning. The President's Commission on Sustainable Development also presents new opportunities in helping build a sustainable development dialogue.

Collaborative Dispute Resolution Resources

National Institute for Dispute Resolution (NIDR), 1901 L Street, N.W., Washington, DC 20036 — (202)466-4764. Contact: Thomas Fee. This private, nonprofit institute is the only grantmaker in the United States devoted exclusively to conflict resolution. It offers grants, technical assistance and information in several program areas, including public policy, the courts, higher and professional education, community justice and innovation. NIDR's higher education program has produced a large inventory of teaching materials. Prepared for use in law schools and graduate schools of business, planning, public administration and public policy, some modules are generic and may be modified for use in other disciplines. NIDR also provides support for public policy dispute resolution, having helped create state dispute resolution programs in sixteen states.

National Council of State Dispute Resolution Offices. Created in June, 1992, at a NIDR-sponsored leadership summit in Columbus, Ohio, this council serves as a forum for information exchange and technical support among the staffs of state offices of dispute resolution that promote and provide dispute resolution services within state government. Although not all of the offices are located within state agencies, each has established a clear relationship with at least one branch of state government. The relationship between state governments and the offices distinguishes them from other private or nonprofit dispute resolution providers. The link between dispute resolution and public policy can be very beneficial. The offices are a proven, effective way of institutionalizing this link.

University Centers. Fourteen theory centers/consortiums, located at major public and private universities around the country, were initially supported by the Hewlett Foundation.

Program for Community Problem Solving, 1301 Pennsylvania Avenue, N.W., Suite 600, Washington, DC 20004 — (202) 626-3183. Contact: Bill Potapchuk. Housed at the National League of Cities, this program provides information and assistance for community collaborations.

National Civic League, 1445 Market Street, Suite 300, Denver, CO 80202- 1728 — 303-571-4343. This league also has been a leader in promoting collaborative efforts at the local level.

Conclusion

In conclusion, consensus-building approaches are not replacements for the traditional methods of resolving disputes. They are creative supplements that engage the affected interests within a community in a legitimate public policy debate. These are not winner-take-all situations, but consensus-based negotiations in which the agreements must satisfy all participants' interests. These approaches have the potential for broadening the options available to those seeking an acceptable balance between conflicting goals.

When dispute resolution is appropriately used it can be a very effective tool for addressing tough problems and crafting policy. Although dispute resolution is by no means a panacea, these techniques can result in significant savings in time, expense and relationships. Even when dispute resolution is used and full agreement is not reached, the issues demanding resolution are usually more clearly understood and outlined and the relationship between the parties has usually improved, thus easing resolution through another, more traditional channel.

REFERENCES

Barrows, Richard. *Public Policy Education: Key Concepts and Methods.* NCR Pub. 203. Madison, WI: University of Wisconsin, 1983.

Briand, Michael. "To Inform Their Discretion: Policy Education and Democratic Politics." *Increasing Understanding of Public Problems and Policies—1992*, ed. S. Halbrook and T. Grace, pp. 15-25. Oak Brook, IL: Farm Foundation, 1993.

Bryson, John M., and Barbara C. Crosby. *Leadership for the Common Good: Tackling Public Problems in a Shared Power World.* San Francisco, CA: Jossey-Bass, 1992.

Danielson, Leon, et al. *Extension's Role in Environmental Policy Conflict—A Handbook for the February 17, 1993 Satellite Conference.* Raleigh, NC: North Carolina Cooperative Extension Service, North Carolina State University, 1993.

Dillon, Kristen L. "Statewide Offices of Dispute Resolution: Initiative Collaborative Approaches to Dispute Resolution in State Government." A briefing paper for state policymakers on behalf of the National Institute for Dispute Resolution and the National Council of State Dispute Resolution Offices. Washington, DC: National Council of State Dispute Resolution Offices, undated.

Susskind, Lawrence, and Jeffrey Cruikshank. *Breaking the Impasse: Consensual Approaches to Resolving Public Disputes*, pp. 35- 80. New York, NY: Basic Books, 1987.

Todd, Barbara Sheen, and Robert M. Jones. "Building Consensus on Development Issues." *Intergovernmental Perspective*, Winter, 1992, pp. 19-22, 38.

USE OF ADR IN EXTENSION PUBLIC POLICY EDUCATION PROGRAMS AND ROLES EXTENSION CAN PLAY IN DISPUTE RESOLUTION

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Potential Extension Roles in Dispute Resolution

Many roles can be played by the extension educator in public policy education and alternative dispute resolution (ADR). The role chosen will depend on many factors, including the particular issue being addressed, timing of the educational program with respect to evolution of the issue, the degree to which positions have hardened among target audiences, the skills/interests of the educator, and the level of support from extension administration.

Policy Education Roles

We identify five policy education roles. These are grouped by "content" and "process" because both are normally needed for successful public policy education programs. Content roles include: *Information Provider* (offers facts or concepts that are authoritative, or relates his or her own experience as input into the decision-making process); and *Technical Advisor* (helps stakeholders sift through the facts and interpret them in different contexts).

Process roles include: *Convener* (someone who takes the initiative in bringing people together to deal with an issue. Once the parties have been brought together it is possible for the convener to assume another role); *Facilitator* (a person or team selected by participants to help format the meetings, set the ground rules for discussion and focus participant attention on the process); and *Program Developer* (helps develop a long-range plan for the educational program and a set of short-run actions to implement the plan. This role might contain both content and process dimensions, content in that it concerns "what" is contained in the program, and process in that it is concerned with "how" it is carried out).

Traditional Alternatives-and-Consequences Approach

The alternatives-and-consequences approach typically involves three main steps: clarification of the problem or issue, development of policy alternatives, and identification of the consequences of each alternative. After proceeding through these steps it is assumed an informed citizenry will make good policy choices.

However, our experience has shown that, regardless of the public policy role being played, groups still may not be able to make and implement policy choices once the public policy education, alternatives-consequences process has been completed and extension has become less involved. The policy process may stop or be sidetracked, stakeholders may become frustrated, policies and plans are not implemented, and issues are not resolved. In addition, the increased importance of issues programming and the increased priority given to measurement of results have increased pressure to take a "resolution-of-the-issue" approach toward public policy education. Bingham (p.6) suggests that the adequacy test of consensus building and joint problem solving often is how agreements are reached and whether they are adequately supported through the implementation process.

Dispute Resolution in the Public Arena

In the public arena, dispute resolution involves resolution of public issues through citizen-participation processes, interest-based negotiation and consensus building. (Notice the emphasis is on process, not content; furthermore, interest-based negotiation and consensus building focus on decision making or policy choice. We choose to label these processes, along with group facilitation, as issue facilitation.) Thus, facilitation skills that have evolved out of "small group" facilitation typically taught in traditional leadership development programs need to be supplemented by collaborative process/dispute resolution skills as well as citizen-participation processes that are more appropriate for the more complex social setting in which issue facilitation takes place.

Let us be clear what we mean by the three processes:

1. *Citizen-participation processes*—are intentionally-planned processes designed to bring citizens together with representatives of public and private organizations to make public choices. To be successful, the process design must be explainable and agreed upon by all parties.

2. *Interest-based negotiation*—emphasizes the awareness of own/other parties "interests," rather than "positions" or "proposed solutions." This focus on interests and avoidance of positions allows the invention of new alternatives that satisfy mutual interests. These may be non-policy alternatives.

3. *Consensus building*—is a method for making decisions that all members of the group can support. The method encourages the mutual education of parties, the creation of joint knowledge,

> the generation of multiple options and the selection of an option that satisfies mutual interests; it is a process for resolving conflicts, not just surviving or managing them (Institute for Conflict Analysis and Resolution, p.2).

Expansion of Public Policy Education Roles

The traditional public policy education paradigm can be effectively modified through adoption of these alternative dispute-resolution processes and principles to focus more effectively on the resolution of public issues. In doing this, the public policy educator continues to work with interested parties in an agreed-upon process role. However, they work during and beyond the policy choice phase, not just through the identification of the alternatives and consequences.

First, the *Facilitator* role would be expanded from emphasis on small group facilitation to issue facilitation. Issue facilitation should continue to be viewed as an educational contribution, because it involves learning an alternative resolution process (as opposed to litigation or arbitration) and the mutual education of involved parties. Second, two new alternative dispute resolution (ADR) roles would be added: *Promoter of Dispute Resolution* (one who suggests the parties consider facilitated collaboration. He or she should also be prepared to recommend competent facilitators); and *Mediator* (one who works with the disputing parties individually or collectively to increase their skills in collaborative problem solving; or one who assumes middle position intervening, interposing, reconciling differences, thereby bringing about consensus and settlement).

Content roles identified for policy education, that is, information provider and technical advisor, remain appropriate. Thus, we suggest an extension of traditional public policy education roles rather than replacement. Dispute resolution techniques are essential if the issue is so controversial that education is impossible. However, we do not visualize the dispute resolution and mediation roles identified here as only being useful in cases in which the alternatives-and-consequences "teachable moment" has been lost. Most notably, issue facilitation techniques should be useful at all stages of the educational process, as would the content roles and the other process roles that remain unchanged under an ADR approach.

Examples of ADR-Related Extension Programs

The following list of activities and projects on facilitation and dispute resolution are examples of the various ways extension personnel have already incorporated ADR concepts and techniques into their public issues and public policy education programs.

Facilitation Programs

1. University of Hawaii Extension. Donna Ching. Materials prepared during 1989-1991 for use in facilitating a strategic planning

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workshop. Instructional videos and participant guides were developed on the importance of content and process focus and on explanations of the "meeting roles" for facilitators, recorders and participants in a facilitated meeting.

2. Western Rural Development Center. *Facilitating Strategic Management*. January, 1993. Project was designed to guide potential facilitators through the steps for conducting strategic management. The manual produced included sections on facilitation; roles and functions of key players; initial agreements between the facilitator, recorder and participants; and giving feedback. An appendix focuses on more specific tools and techniques to assist with facilitation. The target audience was facilitators designated to coordinate strategic management efforts of community, governmental and non-profit organizations in which staff and volunteer time is limited.

3. Universities of Vermont and Connecticut Extension. Ester W. Shoup, Luane J. Lange, Lois M. Frey and Barry W. Stryker III. *Master Facilitator Training Program: Facilitating to Enhance Community Participation and Problem Solving*. August, 1992. This project provides a curriculum and materials (workbooks, overheads, numerous handouts, etc.) designed to enhance the leadership skills of citizens committed to guiding people through a discussion that may lead to a plan of action on a local issue. Skills addressed include nominal group process techniques, team building, keeping focused, summarizing comments, responding to expressed feelings, evaluating what is happening and related topics.

4. Louisiana State University Extension. Bill Branch, Karen Overstreet and Satish Verma. *Coping with Crisis in the Southern Region*. 1992-1993. This project developed a video and *Instructor's Guide* that build on Module 6 of *Working with Our Publics*. The video includes a discussion of issue evolution, twelve examples of extension involvement in controversial issues in the South, and guidelines for working with controversial issues.

5. University of Wisconsin Extension. Terry Gibson and Duane Dale. *Public Issues Education AG*SAT Project*. 1993-1994. Involves production of materials and three satellite video conferences beginning in October, 1993, that focus upon public issues education (PIE), conflict resolution and various educational strategies for extension. PIE is viewed as a broad approach utilizing methodology and techniques from public policy education, leadership development, community development and related fields.

Mediation and Dispute Settlement Programs

1. University of Massachusetts Extension. Christina Petersen. Christina has served as mediator-facilitator and technical infor-

mation provider for a wildlife and hunting conflict. In addition, Massachusetts extension is providing mediation training to persons making the decisions at the local level in the state: various boards, planners and other local officials.

2. Oregon State University Extension. David Cleaves and A. Scott Reed. *Resource Issues and Options-RIO Project.* 1989-present. This project focused on getting technical forestry information into public policy discussions, getting more people involved in forestry issues, developing more effective methods for helping people understand the issues, and providing more research-based information in policy debates. Goals included settlement of natural resources issues through policy development, dispute resolution and citizen action alternatives. Process skills used came from Module 6 of *Working with Our Publics* and involved the alternatives-and-consequences approach; discussions of facts, myths and values; models of decision making; and related concepts.

3. University of California Extension. Leigh Johnson and Valerie Mellano. San Diego Bay wetlands and water quality project. Efforts combined techniques from three approaches to resolving public policy issues: public policy education (California's "Ladder for Policy") whereby alternative policies and their consequences were identified; National Issues Forum procedures whereby well-researched background information was developed to educate participants on issues and policies; and facilitation and mediation techniques through which it was possible to help citizen groups work together to develop enduring agreement on issues and policies.

4. University of Nevada Extension. Mike Havercamp and Dave Torell. Have participated in a wide variety of activities as mediators and facilitators in both dispute resolution and consensus-building processes. Training programs, fact sheets and other materials on mediation, facilitation, shared visioning and alternative dispute resolution have been prepared. A "Natural Resource Issues Conflict Management and Mediation Team" has been formed jointly between California and Nevada to address public land issues. Activities include involvement in a mule deer/cattle grazing controversy near Susanville, California; the Tahoe Basin Watershed Planning project; "conflict avoidance" efforts in an elk introduction project; and training in Ely, Nevada, on conflict resolution and coordinated resource planning. Projects to follow will involve the U.S. Bureau of Land Management, the U.S. Forest Service, Nevada Department of Wildlife, a rancher and several public constituencies.

5. North Carolina State University Extension/Orange County Dispute Settlement Center. Andy Sachs, Leon Danielson, Si

Garber, Mike Levi and David Mustian. *Extension's Role in Environmental Policy Conflict.* Project involved production of satellite video conference in February, 1993, and training handbook. The program was downlinked in thirty-three states and Washington, DC. The program was funded by the U.S. Department of Agriculture's Extension Service and was jointly developed by extension personnel and a public issues dispute settlement expert. It focused on establishing the linkage between public policy education and conflict resolution. Roles in each that can be played by extension professionals were identified.

6. Southern Extension Public Affairs Committee (SEPAC). Contact: Leon Danielson (North Carolina State University). *Mediation/Conflict Resolution Project.* New in 1993, this project was developed to disseminate materials to SEPAC members from the North Carolina satellite uplink noted above, to develop an ADR resources library, and to develop additional materials that would be useful in developing conflict resolution training. A SEPAC e-mail mailing group was established in September, 1993, to share ADR, public policy and public issues education information.
7. Oregon State University Extension. Andy Duncan. *Miracle at Bridge Creek.* Satellite uplink and training materials focused upon coalition building. Process roles of convener and issues facilitator are effectively demonstrated. An e-mail mailing group on public issues education is operational.
8. Washington State University Extension/Association of Washington Cities/Washington Association of County Officials/Washington State Association of Counties. *Program for Local Government Education.* Greg Andranovich, Ron Faas, Kelsey Gray, Lois Irwin and Nick Lovrich. The 1989-1992 project was supported by the W.K. Kellogg Foundation. Interest-based problem solving approaches were applied to multi-jurisdictional demonstration sites: the Grand Coulee Dam Area annexation/consolidation study; and the Mason County Criminal Justice Task Force involving county and city officials, school districts and Indian tribes.
9. Western Rural Development Center. *Environmental Conflict Resolution.* Dave Cleaves (OR), Ron Faas (WA), Emmett Fiske (WA), Kelsey Gray (WA), Neil Meyer (ID), David Rogers (UT), Rudy Schnabel (AZ) and Tim Wallace (CA). February, 1993. Training and notebook. This 1992 three-day training project focused on "interest-based problem solving," and produced an in-depth training handbook covering a number of topics related to meeting management facilitation, consensus building and interest-based negotiation. The regional training involved commitment to do state training back home or get involved in an actual issue.

10. Utah State University Extension. Allen Rasmussen. Several examples of ADR applications as part of on-going projects. In conflict management, examples include dealing with livestock grazers and public land managers on issues related to watershed protection and access to petroglyphs; and dealing with public land managers, recreation, wildlife, livestock, rural communities and Native American interests on public land and associated private lands. Mediation examples include dealing with agricultural and wildlife interests to reduce "mutual animosity"; and developing a rangeland monitoring system (related to data collection) for the Forest Service that has reduced the number of conflicts with livestock interests.

Lessons Learned/Educational Needs of Extension Educator

To support agents and specialists interested in expanding their role(s) to include ADR concepts and activities, new training needs to be offered. Among other things, this training needs to include issue facilitation and mediation skills. Skill training should include extensive role-playing practice in a risk-free setting and involve various scenarios. Also, a summary of ADR resources available for extension's use should be developed. Because ADR has been developing for twenty years, materials, case studies, resources centers, personnel and experience are extensive. We should not reinvent the wheel.

There is a need for increased support from extension administration because of the additional risks taken by educators becoming involved in ADR of controversial issues. This support may be coming. Conflict resolution is one of four competencies proposed by the Extension Committee on Organization and Policy (ECOP) Personnel and Organizational Development Committee, along with strategic planning and management, coalition and group system building, and responding to and facilitating change.

Successful role performance will require that the extension educator be seen as having no professional interest or affiliation that would interfere with his or her responsibility for helping the parties satisfactorily resolve the issue. Perceived individual bias by any of the parties, whether or not it is warranted, will negate effective role performance of the extension educator.

It is our belief that public policy educators should evaluate whether or not incorporation of dispute resolution concepts and techniques would improve their programs. According to O.E. Smith, director of the Oregon State University Extension Service, the importance of developing dispute resolution skills and competencies cannot be overemphasized: "Extension's survival may very well depend upon our ability to acquire, utilize, and help others use these skills. The political and social environment in which we must live and operate will no longer permit the protective blanket of "non-biased" education. The extension policy of non-involvement, of simply presenting the technical facts, will not suffice" (Smith, p. 10).

We have identified several examples from throughout the nation that demonstrate how dispute resolution can be incorporated into extension programs. Fact sheets, training handbooks, videos and other materials are becoming available. It is up to us to adapt them to our own use.

REFERENCES

Bingham, Gail. *Resolving Environmental Disputes: A Decade of Experience, Executive Summary.* Washington, DC: Conservation Foundation, 1985. p.10.

Institute for Conflict Analysis and Resolution. *An Introduction to Negotiation and Conflict Resolution.* Fairfax, VA: George Mason University, 1993.

Smith, O.E. "Closing Remarks." *Western Wire News.* Corvallis, OR: Western Rural Development Center, Autumn, 1992, p. 10.

FRAMING PUBLIC ISSUES AND WORKING WITH THE MEDIA

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Mass media *frames* influence audience perception, discussion and attitudes of acceptance or rejection of an idea; framing often determines the likelihood of an audience to act on the issue presented. What an audience brings to a media experience or message—audience schemas—contributes to their news interpretation, but *framing* may provide media with their most powerful effects, and some researchers suggest this is especially true for newly emerging issues (see Hornig, for example).

Traditional arguments about media impact have media either weighing in with very powerful effects, limited effects or those hefty enough only to maintain the status quo. Oftentimes, maintenance of status quo delivers a resounding punch as mass communication scholars Sandman, Sachsman and Rubin warned us some time ago. This paper summarizes the main points of a presentation about the importance of modern media framing and how those who deal with rural and farm issues might improve media attention to those issues. It also attempts to condense the results of what was actually a workshop or working dialogue between those in the audience at the 1993 National Public Policy Education Conference in Clearwater Beach, Florida, and a panel of journalists. For more than two hours during an afternoon session, media experts and national sources of information about rural and farm news discussed news values, the media's farm news agenda, media process and gatekeeper styles.

News Values

Earlier in the conference, a futurist demonstrated one of media's most important roles when he used a series of newspaper headlines to talk about the past, report current conditions and predict the future. Although there is no small amount of discomfort when those who understand media process see an "expert" reporting history via *USA Today* headlines, it is true that one of media's primary contributions is to record history. Other media roles are to inform, to survey the environment (either as "watch dog" or "lap dog"), to entertain, to educate and to make a profit. None are surprised that the last is the most important. Given these standard roles, the following list of what makes an issue or event newsworthy seems reasonable. News should be: new information, unusual, interesting, timely, surprising. It should also be about change, impact, conflict or human interest. However, the most significant factor in newsworthiness is proximity. Where your news occurred in relation to the newspaper or news station or their market area and the localness or obvious immediate audience-involvement elements of a story are critical in getting coverage. Localization alone is not the primary concern, but proximity of the story to the reporter's beat also plays a role in whether your news is covered.

Coverage of some farm or rural issues may decline if information is framed as science or environmental news. Recent studies conducted by Scientists Institute for Public Information (SIPI) and a 1993 Harris poll found a drop in newspaper science sections from ninety-six in 1990 to forty-seven in 1992. However, those same studies found that reader interest in science has not similarly declined. A 1993 SIPI survey found four in ten American adults actively consuming science news, while 56 percent of the sampled public reported watching programs about science, nature and technology. Some 34 percent say they are involved with science news on a daily basis. Indeed, 75 percent of the respondents said science news is as important as education news and more than 60 percent felt science news is as important as crime, financial, political or entertainment news. The SIPI/Harris survey also found important gender differences in how the public responds to science stories. Women are more interested in news articles dealing with children's health or health care in general, while men's interest peaks more with energy or technological breakthrough stories.

Clearly, there is audience interest in landfill and incineration news stories, the impact of global climate change on farming and food supplies, and the emergence of new foods through genetic engineering. Rural America's issues easily meet news value criteria. However, we face the task of pointing out to some news editors the importance and profitability of reporting our news if the issues are seen as science stories. There is more comfort in the findings that government continues to be media's preferred information source.

The News Agenda

In spite of the public's continuing lack of confidence in local, state and federal government—they typically report greater trust and assess higher knowledgeability for doctors or nonprofit environmental or consumer groups—the media look to government officials and government press releases or reports for both story ideas and background data. That may explain why, in repeated content analyses of media reporting on science and environmental issues, we find half are "yardstick" stories, telling us how much, how little, how often and so on, and half are neither alarming nor reassuring, but provide neutral, explanatory information on a subject.

Regardless of what issue has made it to the media agenda, we can be assured of the following truisms about media's coverage: 1) Information will be accurate; 2) Any errors will mainly be sins of omission; 3) Stories will be journalistically balanced; 4) "Factoids" of science or technological information will be presented without much context; 5) The focus will be on issues immediately relevant to the public; 6) The news will *not* be sensationalized; 7) The information will be accessible to most readers (or viewers/listeners); and 8) If there are weaknesses in the reporting, there is plenty of blame to be shared equally between the journalists and the sources of their information, generally, a government source (see Lewenstein for the source of this modified list and other research on science and the media).

While this may suggest a meaningful news agenda, a healthy dose of reality in terms of the media's perception of public interests can be found in Table 1, a compilation of issues covered by television talk shows in a randomly selected week. We should be reminded that the audience for these twenty-some shows is substantial in most markets. On the other hand, not to give the television medium the appearance of terminal flakiness, Table 2 lists TV's prime time lineup, and we can see that five of the ten most watched shows are

Table 1. TV Talk Show Issues.

ISSUE "TALK"

Celebrities & Elected Officials [Regis & Kathie Lee/Whoopi]
(from Billy Ray Cyrus to Al Gore)

BBQ Equipment & Organizing a Home Office [Today; Good Morning America]

Sports [Arsenio/Leno/Letterman/Larry King]
(from fly fishing to football)

Gang Violence & Crime Stories [Sonya/Sally Jessy Raphael]

Dysfunctional Families [Jenny Jones/Jerry Springer]
(from infidelity to incest)

Control Freaks & Stalkings [Maury Povich]

Wealthy Bachelors [Donahue]

Celebrity Look-a-Likes [Geraldo] & Celebrity Mothers [Vicki]

Mercy Killing & Spanking Children [This Morning/Oprah]

. . . from 21 daily shows in most markets

Table 2. Prime Time TV.

TV'S PRIME TIME TOP

60 Minutes*

Roseanne

Home Improvement

20/20*

Prime Time Live*

Murder, She Wrote

Dateline NBC*

Movie (ABC & CBS Sunday Night)

48 Hours*

Murphy Brown

*news mags.

news magazine format programming. There is a place for rural and farm issues on television's agenda.

Media Process and Formats

Knowing how to present information in the most useful form is probably as important as providing newsworthy items and credible sourcing for stories. A news release is often no more than a wasted tree. It is no secret that most (some report as high as 80 percent) of all press releases received in a day will end up unread, unopened and certainly unused before they hit the recycle bin. Public relations educators, at least the good ones, are teaching their students to know when to send a news brief or advisory, and when to prepare full wire copy or a news report (see Valenti for when not to do a video news release [VNR]). Other formats often more appropriate to consider in providing mediated messages are: fact sheets, features, op-ed commentary, letters to the editor, backgrounders or position papers. Sometimes an arranged meeting with an editorial staff member or columnist results in more effective future handling of your issues than anything sent through the mail or faxed no matter how skillfully prepared.

The key to successful media relations is knowing both the medium and its individual style and knowing the specific individual—the right journalist—for your story. The "reader friendly" newspapers of the '90s are concerned with *anchoring*, providing a consistent ease of knowing what is where and offering newsbriefs; in-depth "extra" sections to provide more information to readers on a selected subject; enhanced visual appeal, more color and tone; more effective organization, usually beginning with mastheads; theme days, with Tuesday or Thursday generally set as the science/health/medicine day; leisure, magazine-style reading sections; and much more story telling rather than the old and tired inverted pyramid. Of course, the above is all true of the better newspapers. You may not always deal with the leaders in the industry, so do not forfeit all of your standard inverted pyramid releases just yet. The message is to know what is best, what is preferred and what is most effective for getting your news into your targeted medium.

Gatekeepers Are People Too

While it is still true the average journalist is an under 40, Anglo, white male with a college degree, the characteristics of U.S. news professionals are beginning to change. The percentage of women and minorities working in the media is increasing—slowly—and the different perspectives they bring to news may shift more, if not a different, attention to rural and farm issues. Recall the earlier reported gender differences in science and environmental issues.

But, for the purposes of this session, the panel reflected some of the best current representatives from environmental journalism and science writing. Panelists Booth Gunter, environmental beat specialist for *The Tampa Tribune*, and Michael Nyenhuis, science writer for *The Florida Times-Union*, have between them many years of award-winning reporting. Samples of their work, particularly recent articles on natural pesticide developments and the Benlate controversy, and land and farming issues in Florida's Everglades, demonstrate the journalistic principles we would like to see more often. But it is important to note that even these two same-state-based, similarly good reporters are individuals and bring style and format preferences to their relationships with sources of information.

These proceedings allow only a brief synopsis of the question and answer period that dominated this session. Some of the highlights follow.

Q&A with Media Panelists

Q: How do I find the right media person to tell me how to frame an urgent rural housing need? We have homelessness in rural areas too.

A: Homelessness is already on the agenda. It is a great issue—human element—for getting media's attention. Key points are proximity and what reporter has been covering this issue. Some have a "conspiracy theory" about newsrooms and think we all know what the other is doing or that we are a bunch of puppets only doing assigned stories. Truth is we come up with most of our own story ideas (both panelists agreed that 70 percent of their story ideas came from personal initiative or interest).

Your job is to know who at the paper would be interested in this story. One resource and a way to start is professional association membership directories; the Society of Environmental Journalists (SEJ) has a reputable membership. Call reporters with your idea and as a way to get to know them.

Frankly, the rural homeless sounds like an easy television piece, lots of visual opportunities. Start with a fact sheet and keep going on to the next person until you find the reporter who sees this as a good story. Keep coming back. Rebuild your fact sheet with new information at every opportunity.

Q: What counts in journalism? What are you after other than awards?

A: Placement. We want our work on the front page. Recognition from our peers comes from work well done. The ultimate is a

Pulitzer, but we also want to make a difference. We feel our power as journalists is to right wrongs. We want to feel we are contributing to solutions to society's problems. Fairness and accuracy is what the reporter takes home. Ultimately, our stories have to be about people.

Q: What is the process for determining whether a story is given in-depth coverage or treated as just a caption?

A: Lots of different staff may be involved in one news item. The reporter writes the story and someone else (copywriter) writes the cutlines for photos and the headlines. When you see a bad headline, you can bet the reporter is just as upset as you are. The problem is that many headline writers are young and inexperienced. Headline writing is an art, a real skill. What you are talking about is an industry process problem. It is like the old inverted pyramid. That form does not allow us to get the readers' attention and build some interest in reading the story in the first place. Telling a story is a softer approach and allows us to grab the audience, but remember, the reporter is the story teller and the more skilled writer. It is another good reason to forget releases and just send straight information or tell us the basics. We will write the story. If we need more background or information, then provide the standard news release stuff.

The Washington Post's media critic says each edition of a paper should have at least one item for the reader to chew on, something like an in-depth feature. That is where extension stories could easily fit. That is a whole lot different from *USA Today*'s shrink-every-story style. So it depends on which medium you are after.

Remember that there are major differences between print media and radio or television. TV is not in trouble for gaining audiences. Newspapers are holding steady, but not gaining new readers, so the effort is focused on attracting new, younger readers. Radio provides you with a youthful audience, television reaches the masses, and newspapers today are still getting you to policymakers and opinion leaders. One day we hope a younger audience will access newspapers through their PCs.

Q: Communications people at universities seem to believe we are in trouble if we give the edge to one reporter over another. What is the best way to "sell" a story idea?

A: The University of Florida (UF) is a good example of what not to do. They send out dozens of eight inch stories directly over the AP wire on a regular basis. That is no good if they want a shot at a longer in-depth piece. We are not going to report on a story that another desk has already run as a news brief and, frankly, one panelist stopped even opening the packages of releases that arrive from UF. They are old by the time he gets them and he is not going to waste time reading them. On the other hand, the special publications, like magazines, sent from universities or industry provide story ideas and are generally more useful. If you really have a good story, call or fax a news advisory to a reporter in advance of some massive release. Most news operations receive PR Wire or similar services. (Both reporters noted the uselessness of most press conferences, especially if travel of any distance is required). Again, the key is to establish and build a relationship with the reporters you want to cover your issue(s).

Q: What do you prefer from us as sources, neutral information or should we be taking advocacy positions on policy education?

A: First, keep in mind that television has less than thirty seconds to tell the whole story and print has limited room to quote you. It is difficult to deal with neutral information from an educator, a non-advocate. We need your neutrality in backgrounding. Not pitching the story, but educating us about what the story is. You are more useful in providing us with the "why" of the story. Then, we look for balancing in presenting points of view.

Q: How can we do better soundbites?

A: Reframe the question and give the answer you feel is most important to the audience's understanding of the issue.

Q: What should we do when reporters make a real mistake, a serious error in print?

A: Reporters will generally stand by their notes, and their editors are expected to back them up. If there has been a genuine misunderstanding or failure to hear accurately what was said, then your best move is to call that reporter and politely try to correct the misinformation—remember, you are building a relationship. And you can always write a letter to the editor offering praise for a story well done when it is appropriate, and suggesting corrections in a report that missed something or misreported something. Letters in print are much stronger than retractions and, if well written, you have not severed a needed relationship by forcing the issue and causing a row. You need the reporter to be informed; let us assume your issue is not going away tomorrow.

REFERENCES

Hornig, Susanna. "Structuring Public Debate on a High Technology Issue: Mass Media Frames and Public Response for Biotechnology-based Research." Paper presented at meeting of Association for Education in Journalism and Mass Communication, Kansas City, MO, 1993.

Lewenstein, Bruce V. "Science and the Media." *Handbook on Science, Technology and Society.* Newbury Park, CA: Sage, forthcoming.

Sandman, Peter M., et al. *Media: An Introductory Analysis of American Mass Communications.* Englewood Cliffs, NJ: Prentice-Hall, 1982.

Valenti, JoAnn M. "VNR's: Exxon's Whipping Cream on a Pile of Manure." *Media Ethics*, 2nd ed. Dubuque, IA: Wm. C. Brown, forthcoming.

BUILDING COALITIONS FOR EDUCATING AND PROBLEM SOLVING: PROCESS, ROLES, WARNINGS AND STYLES FOR EXTENSION INVOLVEMENT

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Some educators pay close attention to planning the coalition-building process; others eschew process planning and operate by the seat of their pants. In either case educators can profit from using a variety of styles when participating in learning and problem solving coalitions. Fielding Cooley's section of this presentation outlines a coalition-building process and corresponding roles. Andy Duncan deals with some issues of practical application in the field and, finally, Judy Burridge relates roles and practice to issue education styles.

THE COALITION-BUILDING PROCESS

Fielding Cooley

In building coalitions, it is helpful to know the events likely to occur or those that might be needed to increase the chances of success. The goal here is to describe coalition building as a flexible, iterative process rather than a linear sequence of events.

According to *Webster's New World Dictionary*, a coalition is an alliance of factions for a specific purpose. There are different kinds of coalitions; some are made up of members who agree to band together to gain advantages over others, i.e., political parties, lobbying associations, nations and businesses. I am concerned, rather, with coalitions made up of members who have little or no initial agreement on values, goals or strategies. They usually form around the need to solve community or regional problems through consensus and group learning. An example is the Oregon Watershed Improvement Coalition (OWIC). Sometimes, as in the case of OWIC, they just seem to happen with limited strategic planning. In other cases, such as the Lane County (Oregon) Child Abuse Forum in which I acted as a process consultant and facilitator, leaders and organizers attempt to map out a coalition-building process.

The process can have nine stages that do not always occur in the same order. Experience indicates some of the stages may even occur simultaneously. Putting the stages into three phases helps us conceptualize the iterative cyclical nature of the coalition-building process.

The Coalition-Building Process

Phase 1

Emergence — Issues and concerns have heated up, risen to the surface, and factions with a stake in the issues (stakeholders) have been called to an initial meeting by a convener. There is enough readiness to work together to warrant further activity.

Stages:

1. The Issues Domain or Community Situation — The context in which the issues "live," hence, the place where coalition solutions are tested and recycled. A place to begin, end, or renew.
2. The Emergence of Issues — Issues and stakeholders are recognized in the public arena.
3. Readiness to Collaborate — Readiness of certain factional representatives to work together around an issue(s) is determined by gathering data prior to forming the coalition or through observation during initial contacts and meetings.
4. Emergence of Conveners and Stakeholders (members) — One or more people who believe that certain stakeholders could form a coalition take the initiative and call the first meetings. Representatives of factions agree to continue meeting and members are accepted.

Phase 2

Stabilization — Coalition members understand each other's values, interests, goals and preferences. Norms, procedures and rules for operating are established and form the basis for future work.

Stages:

5. Recognizing Values, Interests and Directions — Open discussion of members' values and interests and their preferences regarding the issues at stake. Establishing overarching goals that help focus collaborative efforts.
6. Getting Operational Agreements — Development of group agreements on norms, procedures and rules for how the coalition works.

Phase 3

Activation — Wherein work on the issue, i.e., learning, problem-solving, action-planning, implementation, evaluation and sometimes renewal and redirection, is accomplished.

Stages:

7. Gathering Information — Data on issues is collected and presented by and to the group as a part of the learning and problem-solving process.

8. Establishing Common Ground and Agreement on Issues — Finding the decisions, solutions and actions on which the coalition can act.
9. Implementation — Wherein solutions and plans are activated and evaluated.

The roles one might play during the emergence phase include educator, technical specialist, leader, organizer, secretary, participant, spokesperson and convener. Skills to be played include networking, meetings management, facilitation and assessment.

In the Stabilization Phase, when an educator leads a discussion, conflict often surfaces around disagreement on values, goals and processes or how to operate as a group. Therefore, the conflict management role is needed. Conflict management calls into play the skills of problem solving, mediating, negotiating and facilitation. The leader role may again be required to help set the proper direction.

The activation phase requires skills in problem solving, decision making, action planning and evaluating. Doing those things again brings into play the roles of conflict manager, leader and organizer. Implementation of decisions in particular requires leaders, organizers and spokespeople. Skills are needed in maneuvering through the politics of the public policy arena and in mediating the development of "win-win" solutions. Gathering and providing information brings the educator and technical specialist roles into play. Other roles include secretary and spokesperson.

The coalition-building cases with which I am familiar involved members constantly collecting data. Information is not always gathered in the classical research sense but often directly from observation in the field and through members' network of associates and access to institutional data banks.

In case histories of coalitions, it is common to find coalition-building stages occurring in different sequences. The skills and roles identified in this paper can pop up almost anywhere in the coalition-building process. Even in coalition-building cases in which little advance planning is done, knowing how roles and skills might relate to and affect that process should increase the likelihood of developing successful coalitions.

AN OLD WARNING

Andy Duncan

The Extension Service: Process is our most important product.

Even if you have not spent much time around a land grant university you have probably heard that joke or one like it, though it may have been aimed at some other organization or an individual. There is constant grumbling about groups and people who would rather "talk than do," who are more interested in the "how to" than the hoped-for result.

What does this have to do with the ranchers, environmental advocates, loggers and, especially, the extension professionals in the video you just watched about the Oregon Watershed Improvement Coalition (OWIC), and what does it have to do with Fielding's analysis of the coalition-building process and roles for extension in that process?

I believe "process backlash" represents a significant danger to proponents of extension involvement in coalitions that promote learning and problem solving. But, before I elaborate, let me explain that I have not done studies of coalitions. I am a professional communicator, a listener and an observer, as anyone in my field must be.

I am here today for two reasons. First, because I got "up close and personal" with OWIC members while co-producing the video about the coalition. For almost a year, I immersed myself in the history and inter workings of this coalition, which happens to be the type that allows people who are usually at odds to educate one another. Second, I am here because for three years or so I have been a member of the leadership team of the Oregon State University Extension Service's Public Issues Education Initiative. In that capacity I have been, in a sense, working between public policy education specialists like many of you and county extension agents and area specialists. Let me be honest. That is an ugly place, at times.

I imagine many of you are experts on group processes. I do not know about your states, but in Oregon I have seen county extension agents cringe when you use the word "process." I shudder to think what the reaction of those agents might be if, with no tip-toeing into the topic, Fielding started delivering his presentation about how coalition building is a "flexible iterative process rather than a linear sequence of events," and about the roles these agents could play in various phases and simultaneous stages.

Academics want data. I do not have any. But my guess is that the majority of county agents are quite familiar with the importance of tackling assignments in a systematic way, of using a sound process. What they also are familiar with, I suspect, is that a significant number of potential coalition members have little tolerance for "the government" leading them, or even being involved with them, in anything.

Now, I realize lots of extension specialists and agents appreciate how important the process is in building a coalition. *They* probably grumble about others who "shoot from the hip," hitting the wrong targets (perhaps wounding innocent bystanders and inciting riotous group behavior). But, frankly, my impression is that public policy specialists do a much better job of communicating with the "process-is-important folks" than with the "just-do-it crowd." In fact, I think public policy specialists have a serious communication problem with the "just-do-it" types. Let me use a couple of examples to illustrate:

Last spring, at an Oregon workshop intended to improve extension professionals' skills in areas linked to public issues education work, I heard a county agent remark about coalition building that "there is a real danger in a process or system. People may feel it is manipulative, like leading sheep." Later I heard this same agent explaining, in a pretty animated way, how a natural resource issues consensus group he was involved with quickly went from "confrontation to visioning" and spent a long time on that so members of the group could vent their energies on how the land "could be and should be," rather than on how they disagreed with one another.

This agent still claimed to have no use for "process people" — after he had become involved as a subject matter specialist in a coalition-building process he apparently felt was constructive. Why the paradox? I will not attempt to identify all the possible sociological and psychological factors. I will tell you what it seemed like. It seemed like his intense interest in the issues the coalition was addressing just plain overpowered his fears about negative reactions from people who might feel manipulated by a process (I suspect this person's actions offer a clue about what to emphasize in order to communicate effectively with people leery of process).

Recently, while philosophizing about how to build coalitions, another critic of "process people" told me he believes "they use those big words so you'll think you need them. That is part of the stinking problem." How about some emphasis, he added, on common sense? How about emphasizing the importance of truly caring about the issues you are trying to deal with, so *that* comes across to the clients? How about more emphasis on the importance of real expertise in subject matter closely related to the coalition's field of interest?

Wild rambling? I do not know. You can find support for a range of viewpoints. For example, these last comments do not seem incompatible with Lesson #8 in the W.K. Kellogg Foundation's Cluster Evaluation Final Report on Innovative Public Policy Education Projects (Greene, Hahn and Waterman, pp. 25-26):

> Public policy education can be effective in the absence of a formal coalition, but not in the absence of the spirit or broad intentions of a coalition, specifically, the commitment to meaningfully incorporating diversity — by offering policy alternatives that reflect different points of view and, at root, different values — in the form and function of the program offered.

In that same evaluation, a coalition member said, simply: "Coalitions should be bound by a purpose and not by a structure (p. 26) . . . ."

It may appear that I am "with" the process critics, arguing against the importance of Fielding's analysis of the coalition-building process and roles for extension within that process. I do not mean to. I think his process model is valuable. I am simply issuing the warning that there are other ways of looking at coalition building that might be more valuable to certain extension agents, specialists and others. Or, at least, there are approaches that might "ease" certain individuals into studying a model like the one Fielding described.

Bill Krueger, the extension specialist and department head who spearheaded the Oregon Watershed Improvement Coalition, told me this about his experience:

> When I got involved with OWIC I didn't know anything about social sciences or coalition building. I hadn't had any education in the theory or practice of how you get people to do various things or what you should do to get people to do things. We just jumped into it and decided that what we needed to do was to stop the fights that were beginning about natural resources — and to help people get the best information they could to make decisions. That's really all it was.

I do not believe Bill Krueger. I do not believe "That's really all it was." And I wish we had more down-to-earth information on the nuances of how he and practical-minded extension professionals like him play roles in the building of coalitions. I think it would engage agents and specialists who find much of the literature of process too "ivory tower." I suggest you involve more people like Bill Krueger in your future meetings.

Maybe what is needed are more diaries, not journal articles?

ISSUE EDUCATION STYLES

Judith A. Burridge

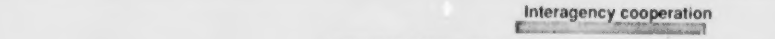
"Issues don't polarize, stuckness does." What educators and facilitators need to do is to be able to adventure or operate in an ad hoc manner when people get stuck (Friedman). Issue educational styles have been discussed by the two preceding speakers. I would like to emphasize that the style or process used by an issue educator needs to fit the audience with whom s/he is dealing. You have listened to Andy Duncan who has described Bill Krueger's method of dealing with conflict. His process skills are covert in his style of delivery and he takes pride in stating he wants nothing to do with "that process stuff."

Fielding, on the other hand, discussed a process of coalition building and developed the study guide to go with the satellite program we just viewed. Both emphasize the use of process skills in order to reach educational goals. Furthermore, others say if you know process, you don't need to be an expert in the subject being discussed.

I would like to suggest that extension educators need to balance their use of process skills and educational expertise in order to have optimum outcomes in public policy education. While sitting in a Family Community Leadership meeting with volunteers and staff members, a question was asked, "Now, what process is occurring here?" Wayne Shull, the staff member who was the presenter, did a quick analysis of what process was taking place. My thought was, "My, he's smooth, we weren't aware of the process techniques being used." When process is obvious it may become annoying and distract from the issue being discussed.

Demands for extension education are changing. O. E. Smith, director of the Oklahoma State University Extension Service, uses this diagram (Figure 1) to illustrate current expectations of extension education. Early in the century, expectations for agricultural extension programs centered on production solutions and usually involved a single discipline in the solution. During the boom years of the 1950s problems became more complex and required expertise that crossed disciplines. In agriculture, this was accomplished by marketing and management education as well as education about production. Basic production, marketing and management education are needed for

Figure 1. The Changing Demand for Extension Education

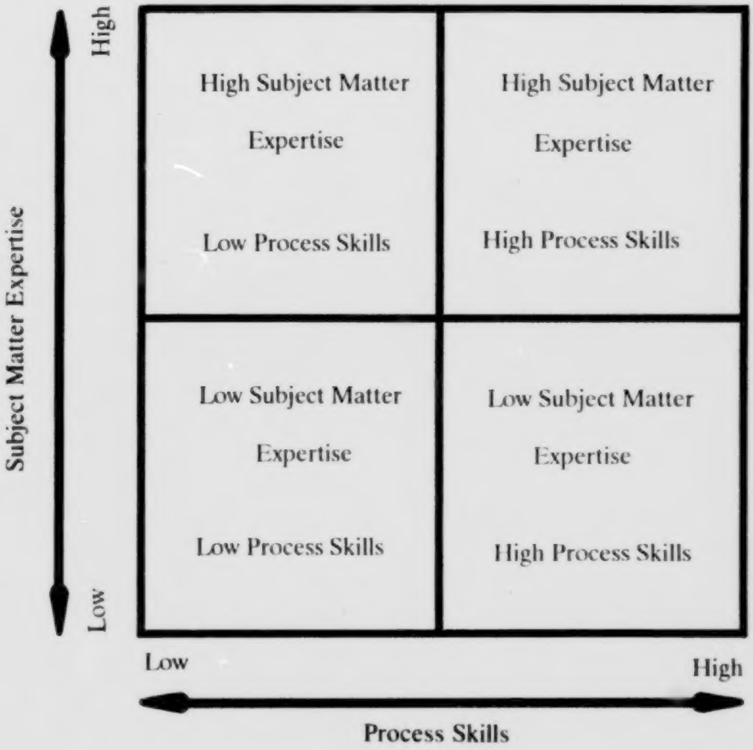


Source: O. E. Smith, Oregon State University Extension Service, 1989 today's complex agricultural problems, but the added dimension of information, education and interpretation of public policies, emerging issues and government regulation is also required. Today's problems require that we reach beyond the university and extension walls and seek cooperation with other agencies (Smith).

When looking at Smith's model, consider it from a different perspective. Look at the curved lines describing the demands as production education, enabling education and public issues education, or, using the popular analogy, catching the fish for them, showing them how to fish or letting them figure out how fishing is done.

Extension faculty, if they are going to be successful, must analyze their style of teaching, and the learning styles of their audience. They must be able to adjust their facilitation and teaching styles to fit the learning styles of their clientele. I suggest borrowing on Hershey and Blanchard's leadership model (Hershey and Blanchard) to view issues education from the styles of the teacher/facilitator and learner/participant (Figure 2).

Figure 2. Issue Education Styles


High
Subject Matter Expertise
Low
High Subject Matter Expertise
Low Process Skills
High Subject Matter Expertise
High Process Skills
Low Subject Matter Expertise
Low Process Skills
Low Subject Matter Expertise
High Process Skills
Low
High
Process Skills

On the vertical axis we look at the subject matter strength. On the horizontal axis is plotted process skills. Consideration should be given to balancing the styles of both the facilitator and the participants. When they are not synchro nized, either subject matter expertise or process skills may become annoying. It is not as important where you are on the quadrant as it is to balance your style with those of the participants.

There are many styles involved in how we process information. Michael Quinn Patton talks about sending students to a county commissioner's meeting to learn how the politicians process information. Do they use logic? Do they use storytelling? Do they like the dialectic model? Are they "big picture" or "little picture" people? His message: adapt your style of delivery to get what you want (Patton).

R. J. Hildreth, retired director of the Farm Foundation, when teaching FCL volunteers about public testimony, suggested balancing the emotional (normative) and the logical (positive) as a process of presenting information to decision makers (Hildreth).

Adaptability of facilitators' styles with that of participants is the way to of getting from stuckness to working together on solutions to issues and problems.

REFERENCES*

Freidman, Edwin. "Shaping Our Future." Paper presented at a symposium, St. Louis, MO, Aug. 1993.

Gray, Barbara. *Collaborating: Finding Common Ground for Multiparty Problems*. San Francisco, CA: Jossey-Bass Publishers, 1989.

Greene, Jennifer, Alan J. Hahn and Carla Waterman. *Innovative Public Policy Education Projects Cluster Evaluation*. Grand Rapids, MI: W. K. Kellogg Foundation, Nov. 1992.

Hershey, Paul, and Kenneth H. Blanchard. *Management of Organizational Behavior: Utilizing Human Resources*. Englewood Cliffs, NJ: Prentice-Hall, 1977.

Hildreth, R. J. "The Role of Knowledge in Making Policy." Paper presented at the Third Regional Family Community Leadership Training, Portland, OR, March, 1984.

Patton, Michael Quinn. "Creating the Future for Extension." Presentation at the National Association of Extension Home Economists Convention, Pittsburgh, PA, 1988.

Smith, O. E. *Looking Ahead: Context for Planning and Strategy for the Agricultural Sciences*. College of Agricultural Sciences Paper, Oregon State University, Winter, 1990.

The Ohio Center for Action on Coalition Development. *Building Coalitions: A reference manual*. Columbus, OH: The Ohio State University, 1992.

*For all three paper sections.

EDUCATIONAL COALITIONS, POLITICAL COALITIONS AND ROLES FOR EXTENSION

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Coalition building is not an end in itself. It is a complicated and time-consuming process that undoubtedly has some intrinsic value, but not enough to justify taking time and energy away from other things we could be doing. Coalition building has to be viewed as a means to an end. Its value comes from what can be done in coalitions that cannot be done by a single organization working alone.

Public policy education has at least five requirements that make coalition building worthwhile (Hahn, Greene and Waterman): 1) It needs to describe and explain multiple perspectives on the issues under consideration or create a forum in which each perspective is represented. 2) It needs to ensure balance or fairness in the treatment of each perspective. 3) It needs to include both technical information and process assistance. 4) It needs to reach multiple audiences, including citizens as well as policymakers and groups on different sides of an issue. 5) It requires the ability to address issues selected or defined by citizens or policymakers rather than by the educators themselves. Each of these things can be done by a single organization, but they can often be done more easily or more effectively if two or more organizations join together.

An *educational coalition* is a coalition that makes educational programs with such characteristics possible. I cannot think of any easy rules about what the membership of such a coalition should be. It should have whatever membership is necessary in order to reflect multiple perspectives, to give balanced attention to them, to provide the necessary content and process assistance, to reach multiple audiences, and to address the issues the way they need to be defined. In our comparative evaluation of eleven Kellogg-funded projects, we considered recommending that a coalition for public policy education should include representatives of all points of view on the issues being addressed, but we stopped short of that (Hahn, Greene and Waterman). What we did say is that there should be some real differences among the partners. Otherwise, why bother with a coalition? We also said there needs to be a substantial degree of parity among the partners—at least to the point at which participants are feeling pressure to seriously consider unwanted or uncomfortable advice. Some of the coalition partners we interviewed said they valued the pressure to do things they knew they would not do if they were not involved in a coalition with other organizations.

Educational coalitions can be distinguished from political coalitions (a distinction suggested by participants in one of the Kellogg-funded projects), and there are two kinds of political coalitions. An *advocacy coalition* is a coalition of like-minded groups—groups that find common interests in a particular issue even if they disagree on everything else—and who join together for the purpose of enhancing their collective ability to influence public decisions in their favor. (Sabatier uses the term "advocacy coalition" with similar meaning). By contrast, a *consensus-seeking coalition* is one that attempts to include all the relevant perspectives on an issue for the purpose of learning about one another and searching for possible common ground on which they can take public action or advocate public decisions. The expectation or hope is that such actions or decisions will have a greater likelihood of approval and successful implementation because none of the relevant perspectives have been left out.

Development of a consensus-seeking coalition could be a long-term goal or vision for a public policy education program. The dialogue and mutual understanding that such coalitions aim for is an equally good goal for public policy education. If an educational coalition can be created with the all-encompassing membership of a coalition-seeking coalition, I think that would be great, and it should be done. But insisting that no educational work should be done before every viewpoint is represented in a coalition is an unreasonably difficult standard to meet. Moreover, I do not believe everybody has to be represented in order for an educator to have the ability to bring all points of view together. Bringing them together can be the goal of an educational program without being the starting point.

Advocacy coalitions, on the other hand, should be avoided by public policy educators. I suppose there is no inherent reason why a coalition of like-minded groups could not plan and implement an educational program that seeks a balanced understanding of all points of view. But I think it would be unlikely. Such a coalition, like a single organization working alone, will find it difficult to address the five characteristics of public policy education programs mentioned earlier. There will be strong pressure on educators to promote the coalition's shared interests at the expense of a balanced treatment of other points of view.

Educators do, of course, experience pressure to join and support advocacy coalitions. When I presented some of these ideas in New York a few months ago, a horticulture agent said, "That's exactly what the green industry in my county wants me to do." He asked my advice, and the best I could offer was, "Try and help the green industry understand that it is *in their interests* to have other perspectives included because stable solutions to the issues the green industry cares about are not likely to happen unless all points of view are understood and taken into account." An educator who simply commiserates with a client group about the stupidity of the opposition is not doing anyone any favors.

Another important point was raised at that same meeting. An agriculture agent from another county said she was surprised no one had talked about the down side of working in coalitions. She said, if extension does everything in collaboration with other organizations, there is a danger funders will say extension is duplicating the work of other agencies and making no unique contribution. In her view, that is a dangerous image to have in times of scarcity when funders are looking for excuses to cut budgets. That has been my nightmare as well—that extension will be ready to become a leading public policy education agency at just the time its funders decide to eliminate the organization.

The agent's comments underline the importance of finding better and better ways to articulate a unique educational role regarding public issues. An extension association director told a story at the same meeting about a water quality coalition in her county in which extension was involved. At some point, the county legislature made a decision to formalize the coalition as a Water Quality Management Agency, and extension got left out. It had to fight its way back in and did so by persuasively arguing that it had a unique public education role to contribute.

Articulating that role, and living up to it, is the flip side of working in coalitions and is equally important. Extension needs to collaborate in order to do a good job—especially in public policy education because of the characteristics mentioned earlier—and to help others do a good job. But it also needs to have a role that it plays in coalitions that is complementary to others and widely regarded as unique and important. If my nightmare is defunding just when extension gets its public policy education act together, my dream is that extension will have a widely held image as *the agency that does educational programs on important issues, addresses the public as well as private dimensions of the issues, brings pertinent information to bear, and helps everyone understand all sides of the issues.* Its reputation for doing those things will be the reason people participate in its programs as well as the reason other organizations collaborate with it in coalitions.

REFERENCES

Hahn, Alan J., Jennifer Greene and Carla Waterman. "W.K. Kellogg Foundation Innovative Public Policy Education Projects Cluster Evaluation Final Report." Unpublished. Ithaca, NY: Dept. Hum. Serv. Studies, Cornell University, 1992.

Sabatier, Paul A. "An Advocacy Coalition Framework of Policy Change and the Role of Policy-Oriented Learning Therein." *Policy Sci.* 21(1988):129-168.

Health Care Reform

ETHICAL ISSUES IN HEALTH CARE REFORM

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The subject of health care reform is much in our minds these days. On the one hand, it is difficult to find anyone who admits to being opposed to health care reform. On the other hand, I think we may all easily foresee it is going to be extremely difficult to come up with a health care reform program that will satisfy everyone. So, if almost everyone agrees it needs fixing, why is it so difficult for people to agree on what we should do to "fix" the health care system?

I want to show that there are at least three different angles—three different perspectives—on health care and the "ethic" of health care. Each of these three perspectives has its own peculiar "ethic" and these ethics are all too often conflicting. Furthermore, not only do we find different people with different ethics approaching this issue from these different perspectives, usually each of us feels pulled by more than one perspective. Thus, for any health care reform program to *really* prove ethically satisfying and successful, it must somehow bridge or go beyond these disparate perspectives.

Let me begin by outlining the different ethics of each of the three perspectives.

Health Care as a Positive Moral Right

As a nation, we have come to regard health care as something of a moral right. That is, individuals have a right to health care, and if a person has insufficient economic resources to pay for such care, we as a society have an obligation to see that poverty is not an obstacle to receiving health care.

Behind this view is the assumption that health care is somehow morally different than other goods and services in our society. We feel no moral obligation to purchase a Cadillac Seville for each and every citizen. We even feel no moral obligation to purchase a used car for someone so he or she may drive it to and from work. Neither do we feel we must purchase a big screen television for each household that cannot afford one out of its own economic resources. But health care, somehow, is importantly, morally different.

There are various kinds of arguments used to support this position. One might argue, for example, that if one's health is compromised, then one is unable to participate in our society. One does not have the same access to the goods and services, jobs and rewards, as healthy people. Thus, our commitment to moral egalitarianism, to equal opportunity, requires that we, as a society, ensure that each and every citizen has access to health care. Indeed, equal opportunity would appear to dictate not only that everyone have access to health care, but qualitatively equal health care.

This moral commitment to the moral equality of individuals is already present in our national system of organ distribution for transplantation. No one can use his or her wealth in this country to purchase an organ, thus excluding people of more meager resources from the chance for an organ transplant to save or improve their lives. Rather, each and every one stands in a line—take a number and wait. The only thing that is supposed to advance you faster in line is a severe crisis in your medical status such that if you do not receive that organ soon you will die.

A different kind of moral argument for this position might be one derived from a view of human life as "sacred," as being beyond price in its worth. Since life is sacred in a way that automobiles are not, we have a moral obligation to ensure that fiscal stinginess on our part does not result in the unnecessary loss of human life.

I said earlier that we, "as a nation," hold to this view. Evidence for this claim can easily be found in the language behind the Medicare and Medicaid acts of almost thirty years ago. The Medicare act explicitly states that every older American should have access to the "best" medical care available without regard to his or her ability to pay. A similar spirit is behind the Medicaid program—that we, as a nation, have a moral obligation to ensure that extreme poverty not be a barrier to access to quality health care.

This moral view, that each individual has a positive moral right to the highest quality health care, is an important assumption behind the Clinton health care reform proposals. Notice three key reasons the Clinton team offers for the necessity for reform:

1. First, there are currently some 37 million persons in America without any health insurance. Furthermore, a like number of Americans are grossly under-insured.
2. Second, even securely middle-class Americans are in great danger of losing their health care insurance. Since insurance companies are in business to make money, they are inclined to avoid subscribers who will make heavy use of medical services. Hence, health insurers are apt to find ways to limit benefits to currently enrolled members, and are extremely apt to deny enrollment to applicants with existing medical conditions. Since the cost of medical care can be so ghastly high these days, without decent health insurance the average middle class family can quickly become impoverished by a single major illness. Indeed,

the Clinton committee argues many Americans are scared away from starting small businesses because they cannot afford the high premiums insurance companies may demand. As the Clinton health care reform committee argues, middle class Americans are afraid to switch jobs because of the prospect of losing their health insurance; and they are scared that through catastrophic illness they may lose meaningful coverage even if they do not lose their jobs.

3. The Clinton committee is eager to assure Americans it will not ration care. It holds we should be increasing access to care, not restricting access. Hence, the Clinton reform proposal is explicitly anti-rationing. It is not a reform program designed to withhold or ration services.

What ties each of these three points together is the notion that Americans should not be vulnerable to loss of access to health care. Rather, access to health care should be guaranteed morally. Clearly, such reasons for health care reform only make sense if one is committed to the position that each individual has a positive moral right to health care.

Not surprisingly, the American Medical Association (AMA) is in favor of health care reform. Physicians, at least at times in their professional history—and the late twentieth century has been one of those times—have held that they have a moral obligation to promote the medical welfare of their patients as individuals. Clearly, if a patient cannot obtain medical services because of an inability to pay, then that patient's medical interests are not being best served. Hence, the AMA has come down squarely on the side of universal access. (Of course, one may be cynical and point out that physicians are liable to have more income-producing business if there is governmentally paid universal access, but I leave that point for a few minutes).

Clearly, if we believe health is a *positive moral right* of each and every individual, then the existing health care system (insofar as it can even be called a "system") is a moral travesty. Each and every day millions of Americans are denied access to basic, primary health care because they cannot afford it. Many of them get sicker and sicker until what had been a simply correctable, treatable problem becomes a life threatening nightmare.

The way health care is now delivered (or not delivered) to individuals shows little or no respect for a positive moral right to health care. To meet this moral demand in a minimal sense will require a health program providing universal coverage. And in a stronger sense of egalitarianism and the value of human life, a suitable health care reform proposal should provide not only for access to minimal health care, but rather for the highest quality health care available.

Health Care and the Ethic of Business

Health care has never been a completely charitable endeavor. Through the ages, physicians have typically felt some professional moral obligation to provide *some* care to the indigent, but (at the professional level) it has usually been at the margins. After all, physicians, like most of us, have themselves and their families to financially support.

With regard to hospitals, the story is a bit more complex. For much of the history of medicine, the economically advantaged received their health care in the home. Physicians made house visits and, when necessary, nurses or other care givers were available, either from family or from hiring. Hospitals, for the most part, were charitable institutions designed to provide a place of care for those so destitute as to not have care available in the home. But as medical science and technology developed, the hospital became an integral locus of health care delivery, whether for rich or for poor. Then, the post World War II period saw a mushrooming of employer-paid health insurance programs, such as Blue Cross/Blue Shield. This meant hospitals would receive adequate reimbursement for the hospitalization of a far greater portion of the American population than ever before. Finally, the institution of Medicare and Medicaid, nearly thirty years ago now, meant hospitals were being compensated for care that previously had been charitable. Not surprisingly, our notion of hospitals as charitable, philanthropic institutions has changed to hospitals as business institutions.

Naturally, the health care industry responded to market forces. The demand for physician specialists, trained in the ever broadening ranges of medical technology, forced up specialist incomes and encouraged more medical students to eschew general practice in favor of specialties. Hospitals that had on hand the latest in medical equipment attracted these specialist physicians and their patients (and their revenue!). Hence, hospitals rose to the challenge—they expanded and modernized their facilities and installed the newest, glitziest technology as it rolled off the production line.

In at least some areas, the health care industry as a business has been enormously successful. America is, without doubt, the leader of the world in terms of medical expertise and innovation. We surely have more MRIs, CT Scans, laparoscopic equipment, etc. per capita than any other country. The attractiveness of our hospitals, as well as the opportunity for high income, has made America the beneficiary of a world-wide physician brain drain. Some of the most talented medical minds and hands from numerous countries—Britain, Canada, India—have brought their considerable talents to benefit the people of America—well, at least to those who can afford their services.

As with most any economic commodity, there will be some who can afford the best and others who cannot. Health care has proven to be no exception. A very few people can afford a Lexus automobile, fewer still a Jaguar or Rolls Royce. A few more have access to a Cadillac. Many Americans, on the other hand, can manage the price of a Ford Taurus, a Toyota Corolla, etc. Nearing the bottom, a few can only manage a Hyundai. And woe be unto those who purchased a Yugo, that import from a country that no longer really exists. And finally, there are many Americans who cannot afford any automobile. Very few Americans would look upon this and cry moral turpitude. The health care industry, analogously, is only behaving according to the same marketplace laws of behavior as automobile manufacturers.

Lest one rush to condemn such practices in the health care industry, please remember it is we who have insisted the industry behave in this fashion. We flock to the specialists when we feel the need. We prefer the hospitals with the best hotel services and the best technology. We prefer to take our business to the physician with whom we are comfortable. The health care industry is only doing what we ask of it: operate according to the *ethic of business*.

From this perspective, physicians, hospitals, insurers, even drug companies are not moral villains. They are simply acting according to the ethic of business.

Still, even from this perspective, there is a need for health care reform. We feel as though the industry has gotten away from us, it has slipped out of our control and now the spiraling costs of health care—around 14 percent of our GNP—economically threaten us. We find it more and more difficult to compete in the international marketplace because our health care costs, borne largely by employers, are far, far greater than those of any of our competitors. And if the real buying power of middle class income has been stagnant for the last decade, it is at least partly because of the double digit rise in health care premiums employers have been faced with most years. Vastly higher employer-paid premiums must mean less money available for real wage increases. So that we have some sense of what we are talking about, let me note that we currently spend around $3,500 per person annually on health care. Individuals pay for only about 20 percent of that figure out of pocket, the rest being picked up by employers and government. Think what kind of pay increase that could mean for a typical, middle income family of four! The Clinton reform proposals argue that costs must be contained—and they are surely right.

How did we get into this pickle, where we seem to be spending far more on health care than any of us would appear to want? The straightforward answer points to how most Americans are insulated from medical expenses. Since the advent of widespread health insurance (the second half of this century) Americans have paid less and less of their health care expenses out of pocket. The bulk comes from employer-paid premiums and government programs such as Medicare and Medicaid. So, although it is partly my money in a very distant sense when I receive medical care, the reimbursement mechanism is so removed from me as an individual that I do not directly feel the expense. Hence, whereas when it is most definitely *my budget* that feels the pain when I buy an automobile for myself, it is not my personal wealth that feels the pain when I receive expensive medical care. So, while I might settle for a Ford Taurus (or in my own case, a *well used* Volvo), when it comes to my and my family's health care, I have no real incentive to economize. Hence, I demand the best of whatever medical care has to offer.

No wonder our expenditures on health care are so high!

In one sense, health care reform is already underway. In response to these economic forces and constraints, employers have turned to cost-effective, managed care programs to limit the growth in what they must spend for health care as a benefit to employees. And the Clinton reform proposal clearly embraces this notion of *management* of health care expenses.

Health and the Social Ethic

Finally, we also regard health as a social good. It is not in our nation's own best interest to have a populace wracked and consumed by disease. From even the most cynical view, sick people do little to contribute to economic production and income taxes. A healthy workforce can produce more than a sick workforce. From a more generous point of view, few of us would disagree with the statement that suffering is bad and health is good. But when regarded as a *social good*, the question is not simply how much health care is in the best interests of *the individual* (that was our first moral perspective). Rather, the question becomes how much health care is in the best interests of *society*, given our limited resources and the welter of other good and services that are of value. For example, how much should we spend on health as opposed to education? As opposed to public housing? As opposed to law enforcement? As opposed to our physical infrastructure—roads, utilities, etc.?

Consider the case, for example, of the Lakeberg Siamese twins, Angela and Amy. The twins were born at Loyola University Medical Center, joined at the abdomen. They shared several major organs, including the liver and a malformed six-chambered heart. Medical opinion was that Amy had no chance of long-term survival; Angela, if separated from Amy, had a 1 percent chance of survival. The Loyola physicians recommended against doing the surgical separation, urging instead that the twins be allowed to die. (I should mention that the Loyola physicians recommended against surgery not primarily on the cost consideration, but rather because they believed it would constitute pointless suffering for *both* of the twins). The Lakeberg parents, rejecting the advice of Loyola physicians, opted to go to Children's Hospital in Philadelphia where pediatric surgeons were willing to perform the surgery, even though they agreed the chances for long-term survival were 1 percent.

Now I have no idea what the costs will be at Children's in Philadelphia. But I can suggest that the costs at Loyola were in the neighborhood of $1 million. As a society, are we willing to pay for that procedure one hundred times with the likelihood of saving one life in the long term? That would be, according to a crude calculus and *ignoring* the huge costs at Children's in Philadelphia, a willingness to spend one hundred million dollars to save one life. I doubt many of us would consider that a prudent investment.

Oregon has taken the lead here. In a bold experiment, the state ranked several hundred medical interventions according to their importance and cost-effectiveness. Each year, the legislature is to decide how much money it can allocate to the Medicaid program. It then runs down the ranking of medical interventions and (using epidemiological statistics) draws the line where it estimates the state will spend that much money if it pays for all the interventions above that line. Not surprisingly, immunizations are near the top, as are appendectomies, antibiotics for bacterial infections, etc. Near the bottom are such items as liver transplants and intensive care unit care for AIDS patients at the end stages of the disease.

I am sure you are all able to see how these three different moral perspectives on health care offer a recipe for conflict.

A health care reform program that satisfies our rhetoric of health care as a moral right of the individual would presumably cover the Lakeberg twins. It would pay for liver and pancreas transplants. But such a program would devastate the economy and draw much needed funds away from other social goods such as schools, housing, roads, defense and job opportunities.

A program that treated health as *simply* an economic good and/or service would do nothing to extend coverage to the uninsured. And in the cold calculations of the marketplace, the suffering of economically marginal people will not be heard.

A program that regards health care *simply* as a social good would inevitably reduce patient choice (something the Clinton committee seeks to preserve), not only in terms of physicians, but also in terms of what services they may receive, e.g., health as a social good would most certainly not fund the Lakebergs, nor would it fund most of the intensive care unit care delivered in our nation's hospitals.

So any health reform program that adheres to just *one* of these ethics is doomed to moral failure according to the other two.

By the same token, it is hard to see that any reform program could satisfy all three at once. The Clinton program would seem to emphasize universal access, while trying to also accommodate economic concerns by means of insurers *competing* for the business of the "health alliances." The committee imagines that administrative costs and fraud can somehow be made to vanish and then whatever is needed will miraculously be paid for. A more jaded view would suggest that if we want to pay less for our health care *and also extend coverage to the currently uninsured*, then ultimately we must buy less health care per capita. In the words that our economists are wont to use, "There's no free lunch."

Is there any way out of this unfortunate position? Or must we be cynics and conclude that any reform proposal is doomed to failure?

I am convinced the only way for us to really make progress toward an effective, and morally needed, health care reform is to openly acknowledge the moral legitimacy of each of these three perspectives at one level; but then we must go beyond that. It will be necessary for us to engage in a meaningful discussion of how to balance these disparate moral commitments. To do that we must go beyond these three perspectives, we must get above them to a higher level of moral value that can arbitrate between them. That is, we must work out a notion of what we want health care to do for us, as individuals and as a community. We must have a higher sense of what the good life is for us as individuals, and what would constitute flourishing for our social community. Only then will we be able to see how medical care fits into that larger picture, of which it must inextricably be a part.

I only hope that we may have the ability and the courage to undertake such an enterprise—our very future, moral and economic, is certainly at stake.

HEALTH REFORM: WHAT THE CLINTON PLAN AND ALTERNATIVES MEAN TO RURAL AND URBAN AMERICA

Edward F. Howard
Alliance for Health Reform

Although I come from Washington, DC, these days, I started life as a Pennsylvanian—and you may not know that Pennsylvania has more rural elderly residents than any other state.

Before going further, let me offer you a word about the Alliance for Health Reform. It emerged from the ashes of the Pepper Commission, for which I served as counsel. Jay Rockefeller, who chaired the Pepper Commission, agreed to collaborate with me on a nonpartisan, non-profit effort to educate opinion leaders on the urgent need to address the health reform agenda. The board also includes Senator Jack Danforth (R-MO) and many who differ on what an *ideal* health reform plan might be, but they agree on the need to act quickly rather than wait for that ideal to arrive.

Our country stands on the brink of comprehensive, fundamental reform of its fatally flawed health care system. For the first time in a generation, we have a real chance to defuse the ticking bomb of health care costs that threatens nothing short of an economic meltdown in just a few short years.

I will not describe in detail the current health care crisis in America. Mark Waymack did a good job of that. But let me reiterate a few simple facts so we all start from the same page. It is not that *most* Americans do not have access to some of the most sophisticated, advanced—and expensive—health care technology available in the world.

But it is a national disgrace that 37 million Americans lack insurance coverage at any time—and more than 60 million will be without coverage sometime in the next two years.

What is more, tens of millions of Americans *with* coverage understand they are a pink slip or a diagnosis away from falling through the cracks.

Meanwhile, skyrocketing health care costs are eroding family income, governmental fiscal capacity and business competitiveness.

As most of you know, rural America has some special problems with health care. Non-metro areas have a higher percentage of people without insurance, higher infant mortality rates, fewer physicians and other providers, and fewer visits to those providers.

Today I have been asked to help you focus on what the Clinton plan contains and what the major alternatives are likely to be. In short, I am supposed to function as a "Washington insider."

A few months ago, I received a fund-raising letter from Congressman Bill Archer, a Republican member of the House Ways and Means Committee. He offered me the chance to contribute $5,000 to the Republican Congressional Campaign Committee. In exchange, I would be able to attend a series of breakfast briefings by House Republicans on health care reform—conveying information without which, as a Washington insider, I would find it impossible to do my job. I chuckled and tossed the letter away.

But James Carville, the irrepressible Clinton White House advisor, got the same letter, and wrote back to Congressman Archer, "I've been called a 'stupid and pathetic country bumpkin,' . . . compared to David Koresh, . . . and blamed for a 65-point drop in the stock market. But never have I been called anything so repugnant . . . as a Washington insider."

We have a chance to make quality, affordable health care a reality for the tens of millions of Americans who now lack it—and a real chance to bring peace of mind to the majority of Americans who *have* coverage, but rightly fear that they, too, could lose that security any time. All Americans, in rural and urban areas, will have their lives touched by the coming reforms. So be careful who you ask for insight.

We have come a long way in health reform in a relatively short time. Health care in the 1988 presidential race, for example, was a secondary issue—less important than crime, drugs, taxes, education, abortion. In Iowa, before the 1988 caucuses, George Bush told an interviewer he would give long-term care "the attention it deserves."

But by the fall of 1991, health care became the major issue in the upset defeat of Dick Thornburgh for the Pennsylvania Senate seat. Harris Wofford told voters, "If every criminal in America has the right to a lawyer, then every working man and woman in America should have the right to see a doctor when they're sick." The political landscape has not been the same since:

- After eighteen months of meetings, Senate Republicans agreed on a reform plan and announced it three days after the Pennsylvania election.
- George Bush, whose advisors were feuding publicly about whether he ought to *have* a health plan before the 1992 election, had one before the New Hampshire primary.

- Exit polls in New Hampshire and elsewhere showed health care as a solid #2 concern, behind the economy, in voters' minds. In the general election, health care virtually tied with deficit reduction as the second most important issue—but was a solid #2 (51-31, with education third at 18 percent) among those who voted for Bill Clinton.

Bill Clinton did not start his quest for the presidency in 1992 as the candidate most concerned about reforming the health care system. Remember, his advisers kept the campaign focused on "the economy, stupid."

But by the time *President* Clinton delivered his State of the Union Address, he was fixated on health care reform: "All our efforts to strengthen the economy will fail—let me say this again, I feel so strongly about this—all of our efforts to strengthen the economy will fail unless we also take this year—not next year, not five years from now, but this year—bold steps to reform our health care system."

He then designated First Lady Hillary Rodham Clinton to head his Task Force for National Health Care Reform. And while the Clinton health reform proposal, sketched in a position paper and a major speech in September, 1992, may not have changed the direction of the campaign, it has profoundly changed the debate about the shape and urgency of health reform.

And you do not really need a Washington insider to get a pretty accurate look at the health plan President Clinton will present to Congress next Wednesday night. All you need is a copy of *Time*, *Newsweek* or yesterday's *Wall Street Journal*. But on the theory that you have been so busy at this conference you have not had a chance to read any of the popular accounts, let me hit the highlights for you.

Universal coverage. The Clinton plan would build on the existing employer-based system of coverage by requiring all employers to pay for 80 percent of the cost of a standard plan for their workers and dependents. Employees would be required to accept the coverage and pay the remaining share of the premium in the plan of their choice. Since 85 percent of the uninsured are either workers or in the family of a worker, that one step takes us roughly 85 percent of the way toward dealing with the problem of the uninsured. The unemployed and anyone else not connected with the work force would get coverage through a regional health alliance, with subsidies available for families with incomes up to 150 percent of the federal poverty line (about $21,500 for a family of four).

Those currently receiving Medicaid acute care coverage would be folded into this new plan for private coverage. Employer requirements would be phased in, as states get up and running, with all of them in place by 1997. As a cushion against the possible loss of jobs in small businesses, the contribution of the smallest, lowest-wage firms could not exceed 3.5 percent of payroll.

Managed competition within a budget. By the time he made the major health care speech of his campaign before Merck & Co. employees in Rahway, NJ, on September 24, 1992, Bill Clinton had explicitly ruled out the "play-or-pay" approach he favored early in the campaign primaries. (In play-or-pay, employers either provide coverage for employees and dependents or pay a payroll tax toward the cost of covering them in a public insurance plan).

In Bill Clinton's new plan, soon to be formally transmitted to Congress, employers would still face a requirement to contribute toward the cost of coverage, but there would be no tax or public coverage option (thus causing some to describe the plan as a "play or else" proposal). In a play-or-pay plan, the lower the payroll tax rate, the more employers would find it advantageous to drop coverage, pay the tax and let government handle employees' insurance. This change has the advantage of responding to critics who saw the public plan as a stalking horse for national health insurance. The disadvantage, in the eyes of single-payer advocates, was exactly the same: They argued that by leaving insurance companies with a central role to play, Clinton's plan would preclude true and complete reform.

States would establish one or more risk pools—called regional health alliances. Under the plan Clinton outlined, new state or regional cooperatives or pools would be set up to arrange the purchase of coverage for all residents (except Medicare beneficiaries and employees of very large enterprises). Coverage would be purchased from a selection of qualified health plans, expected to be mainly managed care networks of providers and insurers. The alliances have a size advantage that would let them negotiate lower rates from the health plans, or networks, and collect from them information that patients could use to shop among plans. Hence, the alliances would be able to "manage," or regulate, competition for patients among the plans on the basis of quality and cost.

A standard benefits package. Every plan would offer a standard set of benefits, defined for all by a national health board. Prescription drugs would be included as would primary and preventive care and limited mental health benefits. Separately, states would be given federal funds to set up limited long-term care programs for severely disabled people of all ages and incomes, and Medicare would be expanded to include a separate prescription drug benefit. Comparisons among plans would be greatly simplified. Individuals could buy additional coverage at their own expense.

Insurance reform. Today's practices that allow insurers to avoid covering those thought to pose a larger chance of filing claims would be banned, and plans would be required to charge everyone in a given area the same average rate—a so-called "community rating."

Setting the budget. A national health board would set an overall limit for spending on health care, both public and private. Those limits would be translated into "capitation fees"—in effect, premium targets, for each regional health alliance. Each year those targets would be adjusted upward by the national board. Alliances would then keep overall spending at or below the targets. The targets would be gradually brought into line with growth overall in the national economy.

States would be responsible for setting up alliances, administering subsidies for low-income people and low-wage employers, certifying health plans, and running data collection and quality improvement programs.

They could *choose* to establish a government-run insurance plan—these days called a "single-payer plan."

Regional health alliances could be state agencies or nonprofit organizations, governed by employer and consumer representatives.

It is appropriate to ask how well this device will fit in rural areas. The problem with managed competition, of course, is that in rural areas there is precious little competition to manage.

When Iowa recently asked one of managed competition's intellectual parents, Rick Kronick, to evaluate the state's capacity to implement that strategy, he concluded it would probably work . . . in Des Moines. The concentration of providers and population was too low in the rest of the state to yield enough "competition" to be managed.

Yes, everyone will eventually have a "health security card." But, as Dan Hawkins of the National Association of Community Health Centers points out, giving an insurance card to Americans in some areas is like giving an American Express card to a Tibetan monk: a nice gesture, but with little practical effect.

Alliances, according to the draft plan circulating, would have several tools with which to address the question of how to ensure adequate health services in rural areas.

On their own initiative, alliances will be able to create additional plans to serve rural areas, or require urban plans to serve rural alliance areas, or offer long-term contracts to plans serving rural areas.

Beyond the alliances, the Clinton plan mentions (with few specifics yet):

- Federal loan guarantees for community-based organizations in rural areas for capital improvements.

- Federal grants to develop telecommunications capacity, to link rural providers with health care centers.
- The National Health Service Corps would be expanded.
- Tax incentives would encourage physicians and other professionals to practice in rural areas.
- Supplemental services would be provided through the public health system for low-income populations—services like transportation and outreach, for example.
- Academic health centers would help develop information and referral structure for special services.

And there will be a general effort to produce more primary care professionals—reforming medical education, reweighting physician compensation, and other steps.

What will all this cost? By the year 2000, about $83 billion in new federal spending:

- $30 billion in subsidies to low-income people and low-wage businesses.
- $28 billion for long-term care.
- $17 billion for the new Medicare prescription drug benefit.
- $8 billion for public health, full insurance deductibility for the self-employed, and overall administration.

The rest of the new resources would be used to reduce the federal budget deficit.

What is controversial, of course, is where to find these new resources.

In April, the Alliance for Health Reform held a forum examining the strengths and weaknesses of various new taxes. But the bruising budget battle just concluded soured completely the atmosphere for raising much new revenue. So the administration suggests that in the year 2000:

- $16 billion in "sin taxes" and a corporate surcharge for large businesses.
- $46 billion in "savings" from Medicare.
- $40 billion in "savings" from Medicaid.
- $16 billion from the effects of the mandate.
- $13 billion in other federal savings.

And here is a safe prediction: this proposal will not pass by voice vote. Some would say the 748 health interest groups in Washington will slow movement toward enactment to a stop.

There are many alternatives being offered by those groups and various lawmakers in both parties. Here is a brief listing of the major ones:

1. A less intrusive "managed competition" proposal by Representative Jim Cooper (D-TN) and other members of the Conser-

vative Democratic Forum. It contains no employer mandate and would tax the value of benefits received by employees beyond the standard package.

2. A similar proposal has been endorsed by the Senate Republican Health Task Force, headed by Senator John Chafee (R-RI).
3. An incremental plan featuring "medical savings accounts," rather like IRAs, that would encourage people to spend more sparingly a large initial amount each year, by allowing them to keep what they do not spend on health care.
4. A "single-payer," or Canadian-style plan, endorsed by almost ninety House Democrats (led by Representative Jim McDermott (D-WA) and several Senators including Paul Wellstone (D-MN).

Already the Clinton plan has been attacked by Representative McDermott for lack of immediate cost controls, and by Senator Phil Gramm (R-TX) as simultaneously threatening fiscal disaster and destruction of the health care system as we know it.

Interest groups have been cautious in their comments. Jim Todd of the American Medical Association calls it a step in the right direction. The American Hospital Association says it is willing to discuss overall budgets. Senator Chafee has been saying sympathetic things about the Clinton plan.

What happens in Congress will unfold over the next six to twelve months, and will be complicated by the dozens of committees and subcommittees seeking to exert jurisdiction over at least part of the plan.

What is more, the attitudes of the American people, to which Congress responds, are muddy as well.

- We worry about losing insurance ourselves, and worry about those who have no coverage—but not so much that we are willing to pay much to solve that problem.
- We favor requiring employers to cover their workers—unless it means a loss in jobs.
- We want to rein in costs, but we also want the highest-tech equipment and procedures, and we want it tomorrow morning within a ten-minute drive.

As a result, the president and his allies have a tremendous selling job to do. Their strategy is clear: appeal to the uneasiness many of us have about our future coverage. The second sentence of the draft plan reads, "Americans lack security." You will hear that theme repeatedly in the next few months.

My own view is that we *will* have a health plan passed within the next year. There is a compelling moral case for reform and an equally compelling economic case. But the reason I am so hopeful is that the political case for reform is overwhelming. Bill Clinton's chances for reelection would be incredibly enhanced by passage of a plan that provides peace of mind—and failure to have such a plan in place would be a serious blow to those chances. Additionally, scores of Congressional delegates have made similar commitments. I believe getting progressive, comprehensive reform is within our grasp and I intend to do all I can to bring it about. Please, help in that important venture.

HEALTH CARE REFORM: THE IMPLICATIONS FOR HEALTH DATA SYSTEMS

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Health care reform, whether at the state or national level, will require greater attention to health care data base development. Regardless of the operational specifics of an eventual reform plan, thorough planning will be needed to establish an information system sufficient for the needs of policymakers, consumers, providers and third-party payers alike. The process of system planning and operation will demand policy decisions at many levels: national, state, local, public and private.

This short paper is not intended to cover all possible policy issues that may arise in the development and operation of health care information systems. Rather it is intended to review many of the issues that have faced states as they strive to implement health care data bases and thereby draw policy implications for national systems development. This review should also reveal that policy debates around health care reform and health care information systems represent more than arguments about the best methods of health care finance and delivery. They embody a national discussion about the way we view ourselves as a nation and about the basic values we want to guide our social interaction.

The issues raised here represent a mixture of concerns that are both applicable to the health care sector specifically and to the development of any information system generally—be it health care, automobile manufacture or financial control of a large corporation. The schemata outlined here are not presented as the only viable approach. They serve primarily as a point of departure for the further refinement of policy analysis in the area of information system design in the support of health care reform.

Health care reform, both at national and state levels, has proceeded with reference to three guiding principles: Quality, Access and Cost. That is, reform should improve access to care without lowering its quality. Indeed, reform should include improved methods of quality control. Additionally, reform should control costs of care and enhance public understanding of the factors driving the costs of care. At the state level, these principles have generally been embodied in information system development. The following set of issues surrounding national health reform information system development should be considered in the context of these same principles.

Purpose

The general purpose of the information system must be clearly understood by policymakers, system managers and users alike. Is the system's primary (or only) purpose that of program administration, control and planning? Or is it also intended as a resource for medical, social science and other types of research? What are the possible purposes for which the system will be used?

In general, an information system exists to answer questions that its users may pose. In the early stages of system development, planners should consider as many questions as possible that its users could advance. The nature of the questions will help inform the purpose and content of the information system.

Scope

The issue of scope, both in terms of information system content and data acquisition responsibility, is paramount. Many single-payer-style and managed-competition-style health reform plans foresee "national data clearinghouses." The policy questions associated with national entities such as these refer to the extent of centralization that will be required for health reform information systems to be effective. Will clearinghouses or similar types of organizations be the repositories and managers of centralized, national systems or will they serve as coordinators and consultants to a less centralized arrangement of regional and/or state information systems?

Regarding the content of the information systems, policy decisions will need to be made regarding the type of information that will be gathered. Will the information be primarily oriented toward health care service utilization? Will the system include information on other kinds of information such as health delivery system structure as well? That is, will existing resources such as medical equipment, physician numbers and specialty distribution be included?

The scope of system content will largely determine the scope of reporting responsibilities. That is, if scope were limited to utilization data, providers would probably have primary responsibility for reporting to the system. In some reform plans, third-party payers would also bear reporting responsibility for utilization. Depending on reform plan—single payer, managed competition, play or pay or some other—and depending on the scope of data content, reporting responsibilities will differ.

Control and Integrity

Operational control and integrity of a health information system are no less important than that of any other data system. Beyond the technical issues of data base control that occupy systems managers (e.g., hardware compatibility, data structures, record linkage, appropriate software, system security), there are public policy questions that must be addressed regarding data acquisition and data use. They range from agency responsibility to user authorization.

In order to manage information systems as significant as those which will be required under health care reform, the designation of a responsible agency (or agencies) will be important. It will be decided whether existing agencies can handle the role or whether one or more new agencies will need to be established. Additionally, decisions will be made regarding the amount of power those responsible agencies will acquire to control the system and enforce compliance with its rules.

The designation of system control and reporting responsibilities will determine, in part, the reporting channels that data suppliers will use. In a centralized system, it is more likely that data suppliers would report directly to national level agencies. Decentralized systems may require that data suppliers report only to their state or regional agencies.

National health reform will require a greater uniformity in data collection. Managers of a national system will likely release reporting guidelines that will demand uniformity of data elements. Decisions will be made standardizing the definitions of each data element collected.

The standardization of data elements is related to the need for system flexibility. As the health care delivery system itself changes, or as demands by data system users change, it will be necessary to change the data system. System managers and policymakers will be pressed to ensure that inflexibility in the information system does not inhibit flexibility and change in the health delivery system it is intended to support. Improved and more efficient methods of health care delivery should not be impeded because the elements of an information system cannot be changed to accommodate their existence.

The issue of user access to a national health care information system will no doubt constitute a major public policy issue. Currently there are innumerable proprietary health care data bases belonging to insurance companies, hospital associations, government agencies and other organizations. The degree to which these organizations allow access to their systems varies greatly.

In contrast to the current array of proprietary data sets, the ultimate user of a national information system will be the public. However, the degree of access any individual or collective user will enjoy must be determined. Who will be allowed access to the data and the degree to which they have access will be important public policy decisions. Users permitted direct access to raw data will likely have an advantage over those limited to uniform data extracts or sets of standardized reports in electronic or printed form. How user rights and responsibilities are distributed will be the subject of significant public scrutiny.

Consumer/Patient

The information requirements of a national health system concerning the individual and family consumers of care will surely increase. The greater the requirements for individual information, the greater the likelihood that individual privacy could be compromised. Yet, for the health delivery system's protection, for the individual's protection and for the ability of the system to provide useful information, many delicate decisions concerning the amount of information to collect about individuals and families will be made.

The collection of consumer and family information will begin with eligibility to be covered under the plan. Decisions concerning consumer eligibility for access to the system will be necessary. Most current health reform plans require citizenship or some form of legal residency before an individual will be deemed eligible for coverage.

Health data systems generally require unique consumer and/or patient identifiers, usually a number. The unique identifier will be required to track each individual's use of the health delivery system. For instance, in a system with benefit portability wherein individuals retain coverage as they change employers, it may be the case that the individual will also carry along deductibles and benefit limits as he or she moves. Today, if an employee changes employers and thereby insurance coverage, the new insurer will usually begin accounting deductibles and limits anew regardless of the individual's prior payment history. A national health information system will require more uniformity in the tracking of the individual's use of the health care system and will retain a longer memory concerning individual utilization.

Beyond individual data collection, decisions will be made regarding the extent to which a national health information system will keep population-based information for use in more systematic health analyses. With universal coverage, demographic, health status and epidemiological information will become even more important when identifying populations at risk for clinical attention. In addition, social and economic information about individuals and populations may be required to anticipate the degree to which clinical need is translated into economic demand for services. Depending on the payment mechanisms in force under health reform, failure to correctly anticipate system utilization could cause serious financial problems for any national health system. Policy decisions will be required to establish the degree to which a national health care information system will be used for such purposes.

Provider

A national health information system will require certain information about health care providers. How much information and how detailed it should be will be subjects of ongoing policy debate. As with consumers, unique identifiers for providers will be a necessity. The identifiers will apply to both individuals (e.g., physicians) and corporate entities. It may be an important distinction to determine whether a free-standing clinic is independently owned or part of larger entity (e.g., owned by a local hospital). If it is not independently owned, it may receive the identifier of its parent organization. How these kinds of corporate relationships are tracked will be the subject of some policy decision. The identification method will likely need to be uniform throughout the country regardless of the health plan implemented.

Structure

The way in which the structure of the health care system is monitored under health reform will be very important. Under the designation of system structure come such things as the type and location of existing physical plants (e.g., hospitals, clinics, nursing homes) and the mix of services available. It includes the type and location of equipment as well as health care personnel and their skill levels.

Decisions about the methods used to keep up-to-date inventories and system profiles of health service delivery structures will be subject to ongoing review. The way in which health service shortages are remedied under whichever health reform plan is implemented will be related to the method used to assess delivery system structure. This and other system adjustments will be associated with the way policymakers perceive the status of the health care delivery structure.

Process

The way in which the process of health delivery and consumption is monitored will be a central function of any information system under health reform. The functional definition of process used to inform the information system will greatly influence the types of data collected. Similarly, the actual data elements chosen as part of the process will limit the scope of process measurement and evaluation.

Utilization data lie at the center of information about the process of health care delivery. Utilization data elements could include patient visits to physicians, the number of hospital admissions, diagnosis and procedure information, among others. Each delivery setting—inpatient, outpatient, etc.—has a number of possible data elements that could be used for measuring utilization. Beyond the problem of limiting the myriad possibilities of data elements that could be included in process measures lies the problem of uniform collection instruments. Uniform hospital billing forms, such as the UB-82 form used for Medicare prospective payment, have been advocated as the basic instrument for gathering inpatient information. The efficacy of collecting information and developing uniform reporting instruments for different types of care and other aspects of the health care delivery process, such as hospital financial details (e.g., gross revenues, debt structure, operating and capital expenses) will undoubtedly undergo lengthy policy discussion.

Of course information about the process of care cannot overlook issues of cost and payment. The problem of measuring service cost can be broken into two parts. If the collection of health cost data takes place at the point of service delivery, information will pertain to the price charged by the provider which, in turn, becomes a cost to the consumer. Health cost data collection could also cover provider inputs. That is, the price hospitals pay for equipment, nurses' salaries and the like might also be collected to measure the input costs of producing medical services. Different types of policy decisions will be required depending upon whether cost data is collected on service inputs, outputs or on both.

The problem of collecting information on payment for service becomes more complicated as one moves from single-payer plans, to managed-competition plans, to other forms of insurance coverage reform. Decisions regarding the collection of information about payment methods will be difficult as well. Different types of information will be needed for capitation payment, fee-for-service, or Preferred Provider Organization (PPO) strategies. Related to the way third-party payers make payment is the issue of collecting information about the premiums they charge for coverage and the costs they incur managing the payment mechanism.

The identification of appropriate process measures and the associated collection of data elements would likely represent the bulk of health information system development. It is at this stage that issues of cost containment, case management, as well as service type and distribution, will receive the greatest attention. Most of the information used to address issues of health system management will come from process-type data collection.

Outcome

Outcome measures and outcome data refer to the end result of care received. They include such things as the management of chronic illness, appropriateness of care or the occurrence of adverse results such as mortality.

The interpretation of outcome data with respect to health system performance can be exceedingly complex. For instance, a hospital that takes more patients with advanced stages of a serious disease may have higher mortality statistics by that cause of death than a hospital that only treats patients in the early stages of the same disease. It may be improper to use outcome data, measured by mortality statistics alone, to infer that the first hospital is not as "good" as the second hospital with respect to the treatment of the disease.

The difficulty of using many outcome measures to evaluate health system performance in the treatment of acute care has limited their use in health system management. On the other hand, in the evaluation of the delivery of preventive services, outcome measures, such as immunization rates, have received greater acceptance. However, it is safe to say that no general agreement has yet been reached concerning the best use of outcome data in health system evaluation.

Despite the lack of a broad array of generally agreed-upon evaluation techniques based on outcome measures, managed competition places greater emphasis on outcome as an indicator of comparative health plan efficiency and effectiveness. There will be significant policy issues raised regarding the development of outcome measures for a health care reform based on managed competition. The types and uses of outcome data included in health information systems will be of much greater importance.

Quality

An overriding principle guiding the development of health-care-reform-inspired data systems will be that of health care quality. Health data systems will be called upon to provide information to be used in the assessment of health delivery system quality and in the improvement of health system quality. In the context of universal access to care, policy definitions of quality care will receive increasing attention. Policymakers and health system managers will demand that the data elements of their information systems reflect their definitions of quality and enable their evaluation of the quality of health systems.

Conclusion

The impact and consequences of health care reform on health information system development will be significant. Important policy decisions affecting the implementation, control, content and use of such systems will be required at all levels of government as well as in the private sector. The scope of data collection, especially with respect to the processes of care, will most likely be the subject of most policy activity. It is likely that the wide array of consumer, provider, third-party payer and government agency interests regarding the process of health care delivery will not always be compatible. The possible detail of information about process needed by health system users could cause conflict with the providers of the information. As a result there will most certainly be policy decisions made with the intent to limit and prevent conflict in the development, updating and use of health information systems supporting health reform implementation.

REFERENCES

Bureau of Health Resources Development of the New York State Department of Health. *Data Systems to Support State Health Personnel Planning & Policymaking.* Washington, DC: U.S. Department of Health and Human Services, Oct. 1992.

Goldberg, Joseph, and John Noonan. "Report to Kansas Data Commission." Unpublished. Topeka, KS: Kansas Data Commission, Sept. 1993.

Holt, Lynn. "Proposal No. 33—Creation of a State Health Data System." Unpublished. Topeka, KS: Special Committee on Public Health and Welfare, Nov. 1990.

King, Martha P. *What Legislators Need to Know About Health Data/Cost Information Programs.* Washington, DC: National Conference of State Legislatures, 1986. Young, Ronald C., et al. *Health Reform Choices.* Manhattan, KS: Cooperative Extension Service, 1993.

A CASE STUDY OF EXTENSION'S RESPONSE TO HEALTH CARE REFORM

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Health care reform may be seen by some as an issue outside the traditional concerns of extension. Yet, it is a consequential issue for rural people and communities. More than any other residential group in society, rural Americans experience the greatest deprivation of access to quality, affordable health care. For this reason, the fulfillment of our traditional mandate to improve the quality of life of rural peoples and communities demands a comprehensive response from extension. This paper highlights some of the spatial inequalities in access to health care services and considers the consequences of these inequalities. It then explores some approaches to empowering rural citizens to become involved in the public discourse and decision making about health care reform.

Spatial Inequalities in Health Care

In our urban society, geographic place has been all but dismissed as a significant factor in social life. Social science research has tended to ignore the question of residence, while policymakers, responding to the demography of politics, ignore the spatial consequences of policies and programs. Because we have all failed to recognize how geography or physical space remains a significant factor in social life, spatial inequalities have emerged and persisted. Spatial inequalities refer to the differences in life chances that arise merely from residential location in either rural (nonmetropolitan) or urban (metropolitan) places. In other words, where you live affects your life chances over and above the effects of any other defining characteristics of individuals, their families or their households. Spatial inequalities exist because space is not simply a "given social fact," an objectively neutral canvas on which significant social processes occur. Rather, space is a key factor shaping the structure and functioning of all institutions and organizations, especially the health care system.

The significance of spatial inequalities for rural Americans is all too easily demonstrated. The preponderance of medically underserved areas are rural. One study found that underserved counties were three times more likely to be rural than urban, and one half the states had more than 75 percent of all their rural counties classified as underserved. This means rural people have less access to health care providers and facilities than urban residents. Indeed, in some rural areas, there are *no* primary care providers, including obstetricians, and this means pregnant women must travel great distances for prenatal care and delivery. For example, in 1988, there were sixty-one obstetric care providers per 100,000 women in urban areas, but only twenty-five per 100,000 rural women. Studies also show that when health services are available, rural residents have fewer choices among health care providers and facilities, and are less able to obtain all levels of care within their communities. Finally, even when services are available, rural residents are less able to utilize them because of a higher proportion of uninsured persons and families within the population.

Quite simply, if you live in a rural area, health care reform may well be a matter of life and death. As a rural resident, you are at greater risk, than if you lived in an urban area, of dying within your first year of life, developing a chronic disease, becoming functionally impaired, having no health care providers within your community—or, if they are present, having no choice among providers—and having no financial access to services. All this just because you live in a rural community. This is the meaning of spatial inequality and why health care reform is so critical to rural America.

Is There a Health Care Reform Role for Extension?

Extension's national health initiative provides an institutional mandate for the development of new programming in this area, but does not necessarily insure the institutional resource base for developing such programming. Some may argue that health care reform involves questions beyond the human resources of extension. From one perspective, this is true. Most extension systems do not have persons who are health care providers on staff. However, this interpretation of the question of health care reform is very narrow, defining health care reform as only an economic or technical problem requiring expert knowledge for analysis and decision making. Indeed, nearly all the debate over reform focuses on the economics of the health care system—how to control the spiraling upward rate of health care costs—as if finding a better way to finance the health system will solve all the spatial and other inequalities inherent in the organization and functioning of health care in America.

An alternative perspective asserts that health care reform is not about the technical issues of more efficient billing systems or more cost-effective ways of financing health care. Rather, these answers will only "tinker" with the system of health care in America without addressing the more fundamental issues of prevention, access, consumer health and the relationship between social inequality and health status inequality. These issues are at the heart of a redesign of our health care system into one that assures equal access to high quality, appropriate care for all Americans. Health care reform should not be decided simply on the basis of economics, for such an approach ignores more substantive concerns. If the current national debate over health care reform does not address questions of spatial and socioeconomic equity in access to the health care system, then we will have simply perpetuated an essentially flawed institutional system.

Extension has a key role to play in this arena by helping to redefine the current debate over health care reform. To best serve the interests of rural Americans, we must move the debate from a narrow focus on economics into the broader, more substantively significant questions of prevention, access, health education and social inequalities. And we must broaden the debate to include not just the experts and those with vested special interests, but all Americans, for these value-based decisions will affect all our lives.

Extension is uniquely situated to broaden the focus of the debate and engage more citizens in the decision making. Extension's reach into every county of every state is its organizational structure facilitating public discussion. Extension's educational programming and its emphasis on collaborative work are the organizational processes on which the public discussion can be built. Extension's traditions of neutrality and information transfer as well as its organizational mission are the philosophical justifications for assuming a leadership role in the public discussion of health care reform. All that is needed is the organizational commitment to the development of focused programming in this area. What follows is a description of how one state extension service has developed its commitment to this issue.

Kentucky's Health Extension Programming

A year ago, Kentucky's state extension task force on health and safety was formed. The task force membership includes not only state extension specialists and county agents, but also health professionals in other sectors of the University, e.g., the Rural Health Center, the College of Medicine and the Markey Cancer Center's Prevention Program. Our approach has been to open participation in the task force to anyone with an interest in health and safety issues. This broad membership has provided the task force with the technical knowledge base to address a wide variety of health issues with new programs and materials.

The task force has two subcommittees: one focused on community health services, the other oriented to individual health behaviors. Educational materials and programming are done by the subcommittees as well as by the committee as a whole. For example, the individual health practices subcommittee surveyed all county extension agents to identify programming topics for specific audiences. The community health services subcommittee is in the process of developing a survey to assess the availability, access, convenience and use of county health services as well as attitudes toward the quality of these services. The survey will first be administered to county extension agents. Then training will be offered to agents so they can use the survey as the basis for community programming.

The task force has adopted the issues-gathering approach for its work on health care reform and related community development efforts. Issues gatherings are based on the Kettering model of study circles designed to encourage "public talk" about community and national life. Issues gatherings provide a structured opportunity for citizens to express their opinions on controversial topics. All participants begin with a common understanding of the issue as presented in an issues brief and discussions encourage participants to evaluate the strengths and weaknesses of action choices. As the discussions proceed, participants are asked to consider the values underlying action choices and to identify points of common ground. We believe issues gatherings are a method for conveying information on contemporary issues that involve the allocation of scarce community resources or the transformation of community resources, organization or goals. With the ground rules for discussion clearly defined, this approach can successfully guide reasoned discussions among opponents of the most contentious issues.

Three examples will illustrate how this approach to engaging citizens in public talk about critical issues has guided the educational programming of the task force. The first issues brief was part of the Appalachian Civic Leadership Project, a Kellogg-funded program in which extension participates. When it became apparent the current governor would move forward on state health care reform as promised during the election, the Appalachian Civic Leadership Project mobilized to provide a forum for public discussion of the issue. An issues brief based on the governor's proposal was prepared for a series of issues gatherings around the state. The discussions focused on the strengths, weaknesses and values underlying the proposal, guided by questions such as: "Who benefits?" and "Who loses with the plan?" and, ultimately, "What is best for the common good?" The Appalachian Civic Leadership Project has trained nearly one hundred issues-gathering facilitators, many of whom are county extension agents. These trained facilitators joined others to conduct a series of issues gatherings statewide, producing an organized public input to the reform process.

A second example occurred just prior to the appointment of the task force when some members were involved in the development of a guide evaluating advanced life support (ALS) versus basic life support (BLS) emergency services. Research shows that a trained paramedic and an advanced life support emergency service, responding within the "golden hour" following a life-threatening injury or heart attack, can increase an individual's chances of survival and recovery by two and one half times. For Kentuckians, access to ALS is not equal. More than half of all counties (primarily the rural counties) have only BLS and virtually none of the eastern Kentucky counties have ALS. Yet, upgrading to ALS represents a significant commitment of community funds for equipment, training and personnel at a time when most rural Kentucky counties face serious economic stresses. Thus, rural counties face some important choices with respect to a critical component of the local health care system. They must make value-based decisions on the balance between the investment of a given amount of community resources against a given improvement in the quality of local health services. The issues brief describes the differences between basic and advanced life support services and then discusses some community options. Community residents thus have a basis for public discussions on their health service options.

Our most recent publication is an issues brief on health care reform that also includes simple definitions of key health reform, health care and health insurance terms. The issues brief introduces the debate over health care reform, summarizing the reasons for the current movement and some of the major proposals for change. The accompanying definitions of key terms offer a simple introduction to the bewildering world of health care terminology, providing participants with a common ground for discussion. Two training programs on health care reform will be offered to county extension agents this fall to introduce the new materials and enhance the agents' skills as facilitators for public discussions of controversial topics.

Although only in the early stages of its work, the educational materials and professional expertise of the task force have already been seized on by county extension agents. For example, one county agent has provided the health care reform issues brief to the local chamber of commerce, which has now requested a special program for chamber members. In another county, the extension agent, who last year organized a social services agency council, is planning outreach discussion groups on health care reform with clients of the various service agencies. In addition, the state Rural Health Center will be using the educational materials in their programming while also contributing to the development of new materials.

Summary

Reform of the health care system must move beyond the economics of the system into broader questions of equality of access, quality of services and the underlying socioeconomic inequalities that compound the limited life chances associated with the spatial inequalities in health care. But this will not happen unless citizens, especially those most vulnerable to the inefficiencies and inequalities in our current health system, force the public discussion into these areas. Currently, the public debate has been defined by those with a vested interest in the current system and concerned primarily with the economics of change. What is needed is a foundation for a new public discourse. Extension can contribute to this effort. But, to do so, extension must build coalitions with health professionals and others who share these broader concerns. The multidisciplinary task force provides the expertise necessary to develop educational materials, while the study circle issues briefs provide a vehicle for opening the discussion of health care reform to all citizens.

Public Issues Education and the NPPEC

PUBLIC ISSUES EDUCATION AND THE NPPEC

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Public policy education evolved from the work of agricultural economists involved in commodity policy extension work. These subject matter specialists were looking for ways to improve their effectiveness as educators while avoiding the pitfalls of taking a position on the policy issues. They focused on identifying important policy issues; developing alternatives for dealing with those issues; and analyzing the consequences of each of those alternatives, all in an objective, educational mode. The "issues-alternatives-consequences" model that evolved combined "content" expertise and "process" methodology, though most emphasis was placed on content, including much outside of commodity policy.

Public policy education specialists have dealt with more than commodity policy as reflected in the National Public Policy Education Conference agenda over the years. In 1990, Barr and Flinchbaugh reviewed program topics for the policy conference and found that commodity, and closely-related, policy was of decreasing importance, although it always had been only part of the forty-year-old conference agenda.

Nonetheless, the public policy education specialists and the National Public Policy Education Committee (NPPEC) continue to be viewed as focused almost entirely on agricultural commodity policy. That perception is reinforced by the fact that the most visible outputs from the NPPEC over the past fifteen plus years, other than the conference proceedings, have been the periodic farm bill projects. The one exception is Module 6, "Education for Public Decisions," of the *Working With Our Publics* project. Module 6 was high quality, but has been the most widely used of the modules because it was "pre-sold" to a network of specialists with subject matter credibility. These specialists were drawn upon as authors and reviewers. The NPPEC promotion of the module was extremely helpful in creating demand for, and use of, the materials. However, Module 6 is identified as a part of the overall project for which others are credited.

In recent years the public policy education "content" arena has embraced home economics (or human ecology) and family issues; environmental, water quality, and other socioeconomic issues important to agriculture, rural communities and society at large; and other policy issues of broad interest to the general populace.

Methodological or "process" developments have included increasing attention to a broader definition of the public policy education methodology, redefining or broadening the inclusiveness of some of the concepts. For example, Hahn has focused some attention on bias versus balance as opposed to the "objectivity" frequently cited as an element of the public policy education process.

The W.K. Kellogg Foundation funded eleven projects in its Innovative Public Policy Education Project Cluster, administered jointly with Farm Foundation. Only a few of the seventy project proposals were submitted by "established" public policy education specialists. Of the eleven funded projects, only three were from these specialists and none focused on commodity policy.

The eleven Kellogg projects incorporated team building skills; coalition development and nurturing; bringing together a range of interests to discuss policy issues; leadership development for those groups needing to be empowered to work in the policy arena; community or interest group problem solving workshops to develop understanding of public policy education methodology; and involving participants in agenda development. The project coalitions brought together a diverse group of land grant university and other organization personnel that had a knowledge base and an interest in the policy issues involved. In some coalitions, land grant university personnel were not even included. These projects utilized a variety of "process" techniques to reach their objectives.

Recently, "public issues education" has been brought forward as an action plan to provide extension staff, from specialists down through county staff, an increased understanding of how to successfully work on controversial public issues in an educational context. The proponents of public issues education clearly saw the increasing involvement of extension educators in controversial issues. But beyond that, they recognized the need to provide an in-service educational program and developed a *specific* proposal to obtain funding to do such in-service programming. They developed the proposal under the public issues education label and have received Extension Committee on Organization and Policy (ECOP) endorsement. That label was selected at least partially because of concerns among some extension leaders that "policy" implies political involvement or perhaps even making or advocating recommendations for specific policy alternatives. "Issues," on the other hand, has a more benign connotation to many and is viewed as more amenable to education.

Public policy education specialists and the National Public Policy Education Committee have for some time recognized the need for increasing understanding of the public policy education methodology as a useful tool for an increasing number of extension employees. However, we have never proposed specific action. Given the ECOP adoption of the public issues education action plan, what role is there for public policy education specialists?

You may contribute individual knowledge of the public policy education process and provide training to increase the understanding of it by extension specialists and county staff in your state. You may contribute disciplinary excellence to the educational programs to broaden understanding of the controversial public issues by helping identify alternative solutions and analyzing their consequences. Or you may choose to do nothing, view public issues education as entirely focused on "process" and act as if you still have control of the "content" agenda.

Clearly, public issues education training must emphasize the importance of having access to, and incorporating into educational programming, a sound content knowledge base. There exists ample opportunity for public policy education specialists to get involved. You must decide what you wish to do, either individually or as a group. I suggest that the NPPEC appoint a Public Issues Education Task Force to work with the two ECOP subcommittees charged with implementing the action plan, the Personnel and Organization Development Committee (PODC) and the Program Leadership Committee (PLC). Specialists affiliated with the NPPEC have the practical experience in the core issues-alternatives-consequences methodology framework upon which public issues education must build. They have increasingly drawn upon emerging process techniques to implement effective education on controversial public issues. They are in the best position to lead the effort to develop the in-service education programming to increase the understanding by extension staff, including specialists and those in the counties, of how to do public issues education. The stage is set! Let's get on with the task!

REFERENCES

Barr, Wallace, and Barry Flinchbaugh. "Forty Years of Increasing Understanding." *Increasing Understanding of Public Problems and Policies—1990*, pp. 15-22. Oak Brook, IL: Farm Foundation, 1991.

Hahn, Alan J., et al. "Principles and Techniques of Public Policy Education Learned from Eleven Innovative Projects." *Increasing Understanding of Public Problems and Policies—1991*, pp. 63-75. Oak Brook, IL: Farm Foundation, 1992.

PUBLIC ISSUES EDUCATION: A COOPERATIVE EXTENSION SYSTEM INITIATIVE TO IMPROVE PUBLIC DECISIONS

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Today, more than ever before, our nation's economic and social well-being rests on its ability to make informed choices regarding public issues. The complex issues facing our society defy single-sector solutions. It is necessary to create forums that bring public and private entities and interested citizens together. However, in order for a truly democratic public decision-making process to take place, citizens need assistance to become active and productive participants.

Issues confronting us at every level encompass difficult choices. Once the public becomes aware of an issue, citizens need to work together to make public choices. Such public problem solving requires discussion and debate from different perspectives. The process is often controversial because individuals' understandings, beliefs, values and specific situations lead them to prefer different solutions.

Given the differences in individuals' beliefs, values and circumstances, it is easy for viewpoints to become polarized and for public issues to harden divisions among social and economic groups. Non-adversarial discussion and debate on issues, and exploration, generation and assessment of alternative solutions are essential to making informed public choices.

The public issue decision-making process should be open and inclusive. It should incorporate extensive and informed debate and deliberation. Only when these conditions are present can the public understand and support the ensuing public policy. This is how I interpret Harry Boyte's vision for "recreating the CommonWealth." This is how I interpret the meaning of self-governance in a democracy.

Who leads this process of public decision making and problem solving? What kind of expertise does one need to "reinvent the CommonWealth?" Michael Briand of the Kettering Foundation, in a paper delivered at this conference last year, provided the response to my questions. He defines political expertise as "the ability to get people to work together to solve public problems." In his view, the purpose of political expertise is "to improve a community's ability to understand the hard choices it must make and work together toward public judgment."

Facts, analyses and expert opinion on consequences of various options have their role in this process. But the critical trait distinguishing effective political leaders from other actors in the process is, in Briand's view, the know-how needed for public deliberation. He challenges public policy educators to supplement their current teaching efforts with a practical educational experience that instructs young Americans how to practice democratic politics (Briand, pp. 23-24).

Improving the practice of democratic politics requires a commitment to "societal learning" that can help people operate effectively in the context of changing local, national and global realities. Our universities have an important leadership role in the societal capacity building required to improve the practice of democratic politics. There are important roles for research and teaching in this long-term process, and there also is a continuing important role for extension educators.

The Cooperative Extension System (CES) has defined Public Issues Education as "educational programs which have the objective of enhancing the society's capacity to understand and address issues of widespread concern." The vision is to become the premier educational resource to guide Americans in relearning the practice of democratic politics. The CES Position Statement on Public Issues Education (October, 1992) articulates the vision for CES:

"With public issues education as a major component of its activities, the Cooperative Extension System is envisioned as a vital and important resource for the nation in the twenty-first century. Extension will be known for the contribution it has made through its ability to:

- initiate public discourse before positions have hardened or a crisis point is reached;
- draw all interested parties into public discourse;
- increase understanding of others' points of view;
- address controversial issues fairly;
- introduce relevant academic knowledge into public discourse, and expand the knowledge base by communicating research needs to the academic community;
- facilitate a process of active learning and discovery;
- involve participants in analysis, forecasting, strategic planning, and problem solving;
- create an understanding of complex, controversial issues;
- broaden the range of alternatives; discover new approaches and opportunities;
- increase the likelihood of collaborative solutions;

- help people and communities anticipate emerging issues and their implications."

There are core values, beliefs and assumptions underlying vision statements like this one that are important to articulate. We have identified four that underlie public issues education. Namely, ***education*** as a powerful tool for improving the quality of public choices; ***dialogue*** among people of diverse backgrounds and points of view as important to enhancing the quality of public decisions; ***willingness to negotiate***, to ***share power***, and to ***explore collaborative action*** as essential to innovative solutions; and ***capacity building*** through education as the opportunity for non-participants to become involved in public discourse.

The Cooperative Extension System will fulfill its potential in public issues education to the extent that extension staff at all levels understand the need for this effort and build their own capacities in the process and content of public issues education. This initiative will fail if the majority of extension staff assume that it is the responsibility of a handful of "specialists." We must strive to make each and every one of our staff an accomplished public issue educator if we are to realize our vision.

This is hard work for all of us—administrators, faculty and staff. We need to discuss, debate and internalize a shared vision for our role in public issues education. We need to establish mechanisms to assure program quality. We need to build internal capacity through meaningful staff development activities. We need to recognize public issue education work in reward and advancement systems. And we need to establish mechanisms for coping successfully with controversy. There is a great deal of work to do in each of these areas.

Recognizing the need for an action plan to make progress toward its vision, the Cooperative Extension System endorsed the report of a task force, created jointly by the Extension Committee on Organization and Policy and the U.S. Department of Agriculture's Extension Service. The report is titled ***Public Issues Education: An Agenda for Action*** (July, 1993). The agenda focuses on organizational understanding and commitment, staff development, and knowledge development and utilization. It sets goals, identifies strategies, lists actions and suggests primary responsibility for implementation of each focus area. The document will be disseminated throughout the system within the next few weeks.

This may be the "teachable moment" and a great leadership opportunity for the community of public policy educators. You have introduced and refined the "alternatives and consequences" approach as well as a variety of other approaches very useful within public issues education. You are also experts at various process specialties that are extremely important tools in conducting public issue education programs. In fact, the Farm Foundation and several experienced public policy education specialists have been involved in planning the national video teleconference series on public issues education, as well as developing the Cooperative Extension System's *Agenda for Action*. In addition to providing visible leadership to building capacity throughout the organization, many of you will continue your long-standing and important function as experts in specific areas of public policy based on your disciplinary background and research interests.

For all of you who devote part of your time to professional development for extension educators, the initiative in public issues education has the potential for increasing your "class size" to the total organization and beyond. As we collectively strive to build expertise in the young generation in our classrooms on and off campus, we can also strive to instruct and empower each of our colleagues, to help them take leadership toward the goal of improving public decisions.

The need is great. This is the call to action. As public institutions and as educators we would ignore it at our own risk.

REFERENCES

Briand, Michael. "To Inform Their Discretion: Policy Education and Democratic Politics." Proceedings of the 1992 National Public Policy Education Conference. *Increasing Understanding of Public Problems and Policies—1992*, ed. S. Halbrook and T. Grace, pp. 15-25. Oak Brook, IL: Farm Foundation, 1993.

Extension Committee on Organization and Policy. *Position Statement on Public Issue Education*. Washington, DC: USDA ES, Sept. 1992.

Extension Committee on Organization and Policy. *Public Issue Education: An Agenda for Action*. Washington, DC: USDA ES, July, 1993.

PUBLIC ISSUES EDUCATION AND THE NATIONAL PUBLIC POLICY EDUCATION COMMITTEE

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I must admit, after a quarter of a century of involvement in extension public policy education, both as a student and a practitioner, I am perplexed and confused. Perhaps the "system," whatever that means, is about to devour us. As the Kansas contact person for the Public Issues Education project, I received a packet of materials headlined, "if issues were alligators." Well, issues are not alligators, but I fear the "system" is crawling with alligators. Allow me to explain.

Public policy education in the Cooperative Extension System was born in the hatchery of agricultural economists who dealt with price and income programs for family farmers. A well-known model that has stood the test of time was used—the non-advocacy alternative/consequences (A/C) model. It did not espouse a political agenda for the Extension Service and it fully understood that value judgments, not scientific criteria established by the experts in the halls of academe, were the basis for policy decisions. The evolution of the National Public Policy Education Committee (NPPEC) paralleled the development of public policy education.

The record of the traditionalists in this business on farm bill education and the famous *Who Will Control Agriculture* project is exemplary, but beyond that, what have we done? That is a good question. Some may take offense at this accusation and will come forward with some examples, state by state, but the record of the national committee and regional committees, in recent times, is slim. Several of us even tried to revisit the structure-of-agriculture question and received little support. Since I chaired the national committee twice in recent years, I will shoulder a disproportionate share of the blame, but also take the license to be heard.

In our defense, in the North Central Region we attempted to broaden our base and include a home economist from each state on the committee because we could document that they were doing public policy education effectively in family issues, but the directors, in their infinite wisdom, shot us down. They refused to allow an agricultural economist and a home economist from each state to serve on the committee.

Ironically, I spent the first two-thirds of my career trying to convince traditional agriculturalists that we should broaden our base and include natural resource and family issues. Now I find, in an agricultural state such as Kansas, I will spend the remaining years defending the importance of agriculture against those who think it is no longer relevant at a land grant university. But then, every nonadvocacy public policy educator must have at least one cause, internal to the system, to fight for.

The public policy education fraternity within extension, I will argue, created a vacuum by 1980 (for lack of a more appropriate documented date) by our lack of an issue agenda much beyond price and income policy. Along came those whose forte is process rather than content and we began to reinvent the wheel. The alligators got into the swamp and the devouring began. The buzzwords became "issue-based programming." Was "issue-based programming" designed to serve the needs of the people, our clientele, or was it self-serving and designed to save the system? Many traditionalists in the fraternity were miffed because we thought public policy education *was* issue-based programming. (Many may think the term "fraternity" is sexist, but, remember, the directors would not let us merge with the sorority). Now we have new buzzwords—public issues education.

Barrows, in the introduction to his classic bulletin on public policy education, which the University of Wisconsin is now wisely reprinting, stated, "public policy education is an Extension program that applies the knowledge of the university to public issues and educates citizens to enable them to make better informed policy choices." In material I received this summer from the University of Wisconsin, it was stated, "public issues education refers to educational programs which have the objective of enhancing the society's capacity to understand and address issues of widespread concern."

Materials from the same project contain a question-and-answer section that attempts to explain the difference between regular extension work, public policy education, issue-based programming and public issues education.

What silly games we play. Frankly, the people who pay my salary, the taxpayers of Kansas, either could care less or would be offended.

What our clientele are crying out for is content, subject matter, vigorous analysis, data, statistics, theories, options and tools that will help them understand, formulate positions, provide answers and solve problems while we are debating abstract concepts, definitions and reinventing new terms that confuse. We keep talking process, process, process and the people want content, content, content.

And, as Hahn has so clearly stated on numerous occasions, it takes a balance to effectively do the job.

A personal case in point. I have, for years, conducted an ongoing policy education program in macroeconomic policy. I just finished a series on the Clinton budget. That budget debate desperately needed factual information and content. In preparation, I searched and I searched for the facts—Office of Management and Budget, Congressional Budget Office, Council of Economic Advisors, U.S. Department of Treasury, Democratic Study Group, Senate Budget Committee Minority Staff. Every data set I received was different. None agreed. Process was abundant. Accurate content was impossible to establish. We did, however, provide factual input into the budget debate by using our Farm Management Association data base and providing our Congressional delegation of both parties estimates of the impact of the BTU tax on Kansas farms. They were grateful and are supportive of our extension programs.

Someone once said, people have problems and universities have departments. We traditionalists in this business address problems that fit our discipline and we analyze alternatives with the tools of economists when society demands much more. Another personal case in point. Last winter I testified, along with two other agricultural economists, before the legislature on the Kansas corporate hog farming law. The economics of that issue are rather straight-forward. But, the issue is more than economics. It is social, legal and political. Have we put a team together to infuse education across the spectrum into the issue? No!

The question is frequently asked is the A/C model sufficient or is that the only process tool the educator needs in the "bag of tricks"? No! Networking, empowerment, conflict management, all of these tools, are making valuable contributions and perhaps it is time for us traditionalists to learn some of these. But, I would also argue that the new kids on the block need to learn how to use the A/C model and practice it. I find less and less of that and more and more extension educators who want to have a "politically correct agenda."

Well, what is my point? Four-fold:

1. We traditionalists are leaving a vacuum!
2. It is time the NPPEC truly broadens its base. Extension education on public policy issues must cut across many disciplines to provide the input citizens need, in the Jeffersonian sense, to make informed decisions.
3. There is room for family issues, national resource issues and, yes, even price and income policy for farmers. There is room for all of us to apply our unique expertise! The record on farm bill issues needs to be replicated on other issues. It is time for some oxygen. Let us get with it!

4. What shall we call it? Public policy education, issue-based programming, public issues education? That's immaterial.

REFERENCES

Barrows, Richard. *Public Policy Education. Key Concepts and Methods.* NCR #203. Madison, WI: University of Wisconsin-Madison.

Environmental Policy: The Legislative and Regulatory Agenda

ENVIRONMENTAL POLICY: THE LEGISLATIVE AND REGULATORY AGENDA

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Long ago and far away in the imaginary land of Wal, there lived an elephant and a butterfly. One day they met, fell hopelessly in love and decided to get married and raise a family. Realizing an obvious problem or two with the match, they agreed the elephant would speak to the king in an effort to find a solution to their dilemma. Upon speaking to the king, the elephant was promptly referred to the owl for consultation. On hearing the elephant's story, the owl quickly responded with conviction. "The solution is simple," he said. "Become a butterfly!" Happy he had found a solution to the problem, the elephant returned to the jungle only to reappear before the owl a few weeks later. "You've given me some excellent advice," said the elephant. "But how do I become a butterfly?" "That's your problem," said the owl. "I just make policy. I don't implement it."

As in the story, legislative solutions to environmental dilemmas frequently seem simple at first glance. Nearly twenty-five years after the first sweeping environmental policy legislation, we have finally realized, although the solution was easy enough, putting it into practice is altogether different. Like the owl in Wal, Congress only makes policy through legislation. Once policy is legislated it becomes the responsibility of the executive agencies to implement it through regulation. My presentation today will focus on environmental policy by addressing what I see as the key environmental issues shaping the legislative and regulatory agendas. I have been asked to provide you with my perspective, not as a Beltway insider, but as an agricultural lawyer, former plant nursery operator and environmentalist.

Historical Perspective

To better appreciate the upcoming challenges inherent in making and implementing environmental policy within the agricultural sector, we have to look to the evolution of environmental policy. In short, we have to look to the past to better understand the future.

As an agricultural lawyer, I believe two historical events have profoundly served as a foundation for modern agricultural law and have had a significant impact on the framing of agricultural policy. These

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events are the Great Depression and the establishment of the Environmental Protection Agency (EPA). The first event led to Congress's vesting the United States Department of Agriculture (USDA) with broad regulatory authority. The second removed some of that authority from USDA and gave it to the EPA. This regulatory shift in 1970, brought about largely as the result of increased awareness and interest in environmental issues, was followed by enactment of a number of environmental laws and corresponding regulations that conflicted with traditional agricultural practices and philosophies. This in turn fostered a "them agin' us" mind-set, pitting agriculturalists against environmentalists. The agricultural community became concerned about erosion of property rights and suspicious of the objectives of EPA's long-term regulatory agenda.

This mind-set is countered by the environmental community's suspicions that production philosophies and agriculture's quest for profits in the production of food and fiber overwhelmed environmental concerns. These opposing perspectives have been and will be responsible for much of the controversy surrounding a number of environmental issues facing today's 103rd Congress.

The following environmental areas are earmarked for discussion by the 103rd Congress: 1) reauthorization of the Clean Water Act (CWA), including nonpoint source pollution, citizen suits, and wetlands; 2) endangered species; and 3) pesticides. They are of interest to the agricultural sector, of interest to me, and have been addressed in several bills. Most notable among these bills is Baucus-Chafee (Senate Bill 1114), which focuses on reauthorization of the CWA. The bill, known as the "Water Pollution Prevention and Control Act of 1993," was introduced by Senator Baucus (D-MT), chair of the Environment and Public Works Committee, for himself and Senator Chafee (R-RI), and has widespread bipartisan support and appears to have the best chance of passage (Camia).

Nonpoint Source Pollution

Nonpoint source (NPS) pollution is extremely difficult and costly to control. Complete abatement demands rethinking and retooling traditional agricultural production practices. NPS pollution has been the target for increasing regulatory attention over the past two decades.

Federal interest in NPS pollution was first extensively addressed by passage of the Federal Water Pollution Control Act (FWPCA) of 1972 (33 U.S.C. Sec. 1251-1387). The intent of this legislation was to restore and maintain the chemical, physical and biological integrity of the nation's waters (Harl, pp. 14- 11). To achieve this objective, the federal government developed a strategy to end pollution through the control of both point and nonpoint sources of pollution. Point sources (PS) were defined as clearly identifiable points of discharge such as pipes and concentrated animal feedlots. Nonpoint sources, while not defined in the original legislation, have been defined to include discharge from diffuse areas such as runoff from farm and ranch land, mining operations and construction sites. Initially, the federal government's role in pollution control focused on PS pollution. The states, in cooperation with the federal government, were responsible for overseeing NPS pollution control (Harl).

Over time, federal emphasis shifted from PS to NPS control (Carriker, p. 13). This policy shift was largely manifested with passage of the Water Quality Act of 1987 (33 U.S.C. Sec. 1329). The change was due largely to federal success in controlling PS pollution. In addition, it became apparent the states had been unsuccessful in controlling NPS pollution and increased federal participation would be necessary to meet targeted water quality standards (Fentress, pp. 808-809).

The Baucus-Chafee bill goes even farther and would vest greater federal oversight in controlling NPS pollution. Nonpoint source pollution is one of the key elements of that proposed legislation (American Farm Bureau Federation). Key Baucus-Chafee provisions addressing NPS pollution amend CWA sections 302 and 319. Section 304 of the Baucus-Chafee bill, "Nonpoint Pollution Control," amends CWA Section 319 by calling for revision of NPS management plans. Under this revision, EPA is given significantly more control over the substance and format of these plans. This is accomplished by requiring that the EPA Administrator issue "guidance" in the preparation and implementation of CWA Section 319 plans (Krause and Porterfield, p. 9).

Agricultural interests see the amendment of CWA Section 302, "Comprehensive Watershed Management," and not 304, as the central NPS focus of Baucus- Chafee (Krause and Porterfield, p. 7). Their belief is based, in part, on the use of comprehensive watershed management plans as a means of "integrating water protection quality efforts under the Act with other natural resource protection efforts" (Senate Bill 1114, Sec. 321 (a)(1)(B)) and allowing for groundwater to be identified within a watershed management area. Both provisions would expand the scope of NPS oversight.

Some interests express concern with the language of Section 302 of the bill addressing "Activities of Federal Agencies." This new section would provide that "each activity of a Federal agency that affects land use, water quality, or the natural resources with a watershed planning unit for which a plan has been approved, be carried out in a manner that is consistent with the policies established in the plan." (Senate Bill 1114, Sec. 321 (h)(2)(A)). Since EPA must approve any watershed designation plan, and since federal agencies are required to act in accordance with that plan, critics argue this provision could place numerous federal activities under the control of EPA. Federal activities likely to be affected would include timber, mining and other operations, issuance of permits, federal funding and other federal activities (Krause and Porterfield, p. 9).

Nonpoint source pollution control is also the focus of the Coastal Zone Management Act (CZMA) pursuant to the 1990 amendment (16 U.S.C. Sec. 1451 et seq.) of that act (Thunberg, p. 13). As amended, Section 6217 of the act authorizes the National Oceanic and Atmospheric Administration (NOAA) and the EPA to assist coastal states with an approved coastal zone management program to develop NPS control programs (U.S. Environmental Protection Agency, pp. 1-4). Erosion from cropland, confined animal facilities, application of nutrients and pesticides to cropland, grazing management and cropland irrigation have all been recognized as sources of agricultural NPS pollution affecting coastal waters (U.S. Environmental Protection Agency, p. 2-2). NPS pollution control under the Coastal Zone Management Act has raised questions regarding regulatory duplication between Section 319 plans under the CWA and 6217 plans under the CZMA. These questions could be addressed as part of the reauthorization process for the CWA.

Other questions raised by the agricultural sector regarding NPS oversight center on the lack of adequate resources necessary for effective implementation and the costs to the regulated community. Agricultural producers contend market realities have not been adequately considered by legislators and regulators in structuring NPS programs. They argue that because of their inability to increase product prices, they cannot meet added NPS program costs and remain in business.

Environmentalists counter this argument by noting that of the estimated 60 percent of existing water quality violations attributable to NPS pollution, agriculture is responsible for a significant proportion of those violations (Copeland, p. CRS-5). Since agriculture is a major part of the problem, they argue, agriculture should play a major part in its solution.

Citizen Suits

With the exception of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (7 U.S.C. Sec. 136, et seq.), all major environmental laws contain citizen suit provisions. Under these provisions, when the federal government fails to act, private citizens can sue the administering agency to comply with its statutory, non-discretionary legislative mandates. That is, enforcement of the "shalls" not the "mays" of enacted legislation. Citizens may also sue the violator of the law.

Citizen suits are viewed by a number of environmentalists as necessary and effective tools for implementing environmental policy within the agricultural sector. Critics view these provisions as placing the citizen in the role of private attorney generals. Over the years, the CWA has been the focus of a number of citizen suits (Miller, p. 8).

The Baucus-Chafee bill expands the scope of the CWA's citizen suit provision (Senate Bill 1114). It does so by permitting citizens to sue for past violations. Currently, the CWA only allows suits brought for violations ongoing at the time of suit. While this provision is viewed favorably by environmentalists, agricultural interests see it as moving the citizen suit provision from a corrective position to a punitive one (Krause and Porterfield, p. 13). Critics of the provision are also concerned its incorporation within the CWA will serve as a template for inclusion within other environmental laws such as the Endangered Species Act (ESA) (Krause and Porterfield, p. 13).

Wetlands

Estimates by the Fish and Wildlife Service (FWS) place wetland loss since the nation's settlement at greater than 115 million acres, with some 290,000 acres lost annually (Zinn and Copeland, p. CRS-1). Currently, no single piece of law collectively addresses wetlands protection (Zinn and Copeland, p. CRS-1). Recently, however, separate comprehensive wetland legislation has been introduced for tie-in within Baucus-Chafee. The bill (Senate Bill 1304), known also as the "Wetlands Conservation and Regulatory Improvements Act," is the second attempt in as many years to address wetlands protection. The major provisions of the bill include improving the efficiency, consistency and fairness of wetlands regulations; easing federal wetlands compliance requirements for farmers and ranchers; establishing a better working relationship between state and federal governments; and increasing the emphasis on wetlands protection and restoration nationwide.

This bill provides incentives for both agricultural and environmental interests. In addition to simplifying agricultural compliance with wetlands protection efforts, it also exempts some 53 million acres of previously converted croplands from CWA compliance (Kirby). The incentives favored by environmentalists include making wetlands protection and restoration a goal of the CWA and directing federal agencies and the states to establish a "National Wetlands Restoration Strategy."

Some provisions of the bill do not fare well with either agricultural or environmental interests. On the agricultural side, property rights are an issue. Some argue the added costs of implementation could result in a "taking" of farm and ranch lands, in violation of Fifth and Fourteenth Amendment rights (Eckel, p. 10). On the environmental side, wetlands delineation is one issue. A number of environmental interests are displeased with the bill's provision calling for the use of the *1987 Corps of Engineers Wetlands Delineation Manual*. The manual was revised in 1989, but the revision created such confusion and controversy in delineating wetlands, that Congress authorized the National Academy of Sciences to conduct a wetlands study designed to develop new delineation guidelines (Zinn and Copeland, p. CRS-4). Until that review is completed, the 1987 manual is in effect. The 1989 revision expanded the definition of wetlands, thereby increasing the amount of land so designated (Eckel, p. 7). Shelving the 1989 revision in favor of the 1987 manual significantly reduced the amount of land designated as wetlands.

Another issue in the proposed bill which has generated concern among environmentalists is the mitigation provision. They argue that mitigation, the replacement of wetlands in kind, allows the continued destruction of wetlands (Zinn and Copeland, p. CRS-7). This contention is based on the fact that the mitigation process is not based on good science and experience which demonstrates that mitigation failures outnumber successes.

Endangered Species

Environmentalists consider the Endangered Species Act (ESA) the most important piece of legislation preventing the extinction of plants and animals (Corn, "Summary"). As defined by the ESA, an endangered species is "any species which is in danger of extinction throughout all or a significant portion of its range" (16 U.S.C. Sec. 1532 (6)), while a threatened species is "any species likely to become endangered within the foreseeable future throughout a significant portion of its range" (16 U.S.C. Sec. 1532 (20)).

Currently, several bills have been introduced to reauthorize and amend the 1973 Endangered Species Act. Key provisions of bills proposed by Representatives Tauzin of Louisiana and Fields of Texas are designed to provide for a five- year reauthorization; ensure the scientific integrity of the process to list threatened and endangered species; ensure balanced consideration of all impacts of listing decisions; and provide that private landowners and other nonfederal parties are not compelled to comply with more stringent procedures and standards than are federal agencies. The major provisions of a bill introduced by Senator Baucus encourage earlier, more comprehensive species conservation; improve efforts to recover species by speeding up the development of recovery plans; and create incentives for private landowners to protect endangered species.

Even with the incentives provided by these bills, opposition is expected from several sectors. On the agricultural side, the issue of property rights is again raised by farm and ranch concerns. They argue that, amended or not, the ESA creates serious economic consequences for agriculture, with insufficient compensation provided to property owners by the government (Corn, "Summary"). Supporters of reauthorization favor strengthening the ESA through increased funding and accelerating the recovery of listed species for which no action has been taken (*Kiplinger Agriculture Letter*).

ESA reauthorization will be a challenge for the 103rd Congress. Field issues related to such endangered species as the Northern Spotted Owl have deeply polarized many factions subject to the act and have, in turn, generated considerable debate about the act's future. Reauthorized or not, Congress will probably appropriate the funds necessary for continued implementation of the current law (Corn, p. CRS-2).

Pesticides

No one environmental policy issue surfaces with such consistent regularity as that of pesticides. Issues related to pesticide use and impact weave through nearly every major piece of environmental legislation. Some of these issues include ground and surface water contamination, endangered species, food safety, hazardous waste disposal and cleanup.

Once again, pesticides have dominated the popular press with the recent National Academy of Sciences Study, "Pesticides in the Diet Of Infants and Children." The study was designed to determine "whether there are adequate protections for infants and children in the pesticide risk assessment process" (*Chemically Speaking*, July, 1993, p. 1). The conclusion was that the risk assessment process needs improvement, specifically in the form of better data (*Chemically Speaking*, July, 1993, p. 2). EPA Administrator Browner responded by calling for more pesticide regulatory oversight. What follows are two pesticide issues currently under consideration by Congress. They are food safety and minor use registration.

Food Safety — A number of scientists and public health officials agree that microbial contamination of foods, not pesticides, pose the greatest food safety threat to the public (Vogt, p. CRS-6). The public sees it differently. In one study, 79 percent of consumers surveyed see pesticides as the most serious food health threat (Vogt, p. CRS-3). The pesticide-food safety issue has recently surfaced in the courts, prompting EPA and Congressional action (*Chemically Speaking*, Feb. 1993).

The U. S. Court of Appeals for the Ninth Circuit has ruled the EPA must adhere to Delaney Clause provisions of the Federal Food Drug and Cosmetic Act (FFDCA) (7 U.S.C. Sec. 138 et seq.). The Delaney Clause, also referred to as the Food Additive Amendment of 1958, is found in Section 409 of the FFDCA. Delaney sets a zero risk standard for carcinogenic residues. Under the ruling, the EPA can no longer allow carcinogenic pesticides to accumulate in processed foods (*Pesticide & Toxic Chemical News*, June, 1993). For years, the EPA interpreted Delaney as containing an exception for pesticides posing a trivial or *de minimis* risk (*Chemically Speaking*, July, 1992, p. 1).

The Ninth Circuit Court's action is of significant interest to agricultural producers. Of the 300 pesticides registered for application to foods, some 67 have been found to induce cancer in laboratory studies (*Chemical Regulation Reporter*, July 10, 1992). The EPA acknowledges that some 35 chemicals and a number of uses will be impacted by the Ninth Circuit's ruling (*Chemical Regulation Reporter*, July 10, 1992).

Supporters of Congressional moves to change Delaney argue the EPA is being forced to adhere to a law based on 1950s technology. When implemented in 1958, residues could not be detected with then-existing technology. Now, however, science has advanced to the point at which residues can be detected at concentrations of one part per billion. This is equivalent to a pinch of salt in 10,000 tons of potato chips (Nesheim). There is no way, producers argue, that a crop could be produced without any residues being detected in the processed product. Strict adherence to the Delaney standard would be devastating. Opponents counter that Delaney should be strictly enforced. To not do so would jeopardize public health.

Members of Congress have introduced several bills proposing changes in the application of Delaney. These bills generally provide for a "negligible risk" standard in establishing tolerances for both raw and processed commodities (Vogt, p. CRS-3). Under Section 408 of the FFDCA, the EPA is allowed to weigh the benefits of pesticide use and set less stringent tolerances for carcinogenic residues on raw agricultural commodities. Subsequently, EPA has pursued a policy of setting different standards for carcinogenic pesticide residues in processed and raw foods (*Chemical Regulation Reporter*, July 10, 1992). The emphasis of the currently proposed bills appears to be that of setting identical standards for both raw and processed commodities. Because of the health and production arguments for and against Congressional action on Delaney, this is one environmental issue with little if any ground for compromise.

Minor-Use Pesticide Registration — In general, all pesticides must be registered by EPA. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), together with rules promulgated by EPA set forth the requirements for pesticide registration (USDA Economic Research Service, p. 37). These requirements are quite complex and need not be elaborated on here other than to point out that EPA will not register a pesticide unless it is satisfied its use, as specified by the label, will not cause undue harm to humans or the environment. Pesticides must be reregistered periodically and EPA must make the same kind of judgment on a reregistration that it does on an original registration. Registration is the cornerstone of FIFRA and is costly.

Minor-use pesticides are defined as low-volume, low-profit pesticides applied to a variety of crops such as vegetables, fruits, ornamentals, nuts and other specialty crops (*Chemical Regulation Reporter*, March 6, 1992). These pesticides do not provide sufficient economic incentive to support reregistration and many manufacturers are refusing to reregister them (*Chemical Regulation Reporter*, March 6, 1992). Agricultural interests are concerned that losing the use of these products will prohibit the production of numerous minor crops and devastate producers in the process. The revenues generated from the sale of minor-use crops are substantial. EPA estimates that of the $70 billion in agricultural sales in 1990, minor crop sales accounted for some $30 billion (*Chemical Regulation Reporter*, June 11, 1993). Some states, such as Florida, would be devastated by such losses since all crops grown in Florida, including citrus, are minor crops.

To address agricultural concerns, the federal government has encouraged the retention of minor-use pesticides by establishing the ongoing USDA administered "IR-4" program. This program enables the USDA to assist in collecting data for the support of minor-use products (Womach, p. CRS-4). The end result aids in defraying reregistration costs for minor-use registrants.

A coalition of farmers and farm organizations known as the "Minor Crop Farm Alliance" (MCFA), has successfully initiated legislation known as the "Minor Crop Pesticide Crop Protection Act of 1993" (Womach p. CRS-4). Sponsored by Representative de la Garza (D-TX) in the House and Senator Inouye (D-HI) in the Senate, the bill provides a series of incentives for registrants. One such incentive speeds up the registration process (Womach, p. CRS-4). Chance of passage looks good for several reasons. First, crop protection alternatives are not being developed quickly enough to mitigate the loss of minor-use products. Second, the loss of minor-use products may result in the use of less environmentally friendly pesticides and increasing off-label uses. Finally, minor-use pesticides can play a beneficial role in Integrated Pest Management (IPM) programs.

Pesticide Reduction: A Policy Alternative?

The Clinton administration appears committed to FIFRA reform and, according to Administrator Browner, will demonstrate that commitment in the fall of 1993 (*Pesticide & Toxic Chemical News*, July 14, 1993, p. 18). Currently, pesticide use is a necessary activity for crop production. Nevertheless, this activity has, and will continue to have, detrimental impacts on the environment. This is clearly reflected in the number of environmental laws and corresponding regulations addressing pesticide use and impact. To reduce the negative impacts, there must ultimately be a reduction in pesticide use.

Lowering the grade standards for fruits and vegetables has been suggested as one approach to reducing the amount of pesticide use in agriculture. This approach is based on the premise that many pesticides are used to meet the cosmetic requirements of the grade standards. This premise has recently been the subject of an EPA study conducted by Leonard Gianessi, a fellow with Resources for the Future (*Pesticide & Toxic Chemical News*, Nov. 4, 1992). In his study, Gianessi concluded most producers use pesticides to control pest problems, not for the cosmetic benefit fostered by the federal grade standards. He concludes changing the standards to permit more surface damage would not significantly decrease the amount of pesticide use on fruits and vegetables.

Nevertheless, critics of the standards still contend that because of the standards, growers are required to apply more pesticides. Gianessi notes federal standards "already have significant allowances for surface damage." While the EPA study proves a credible argument, questions still remain regarding the efficacy of lowering the standards. Gianessi also notes that policymakers need to decide "to what extent they want to continue funding research, or doing consumer surveys . . ." He adds that policymakers "must decide whether the administrative costs of changing the standards are worth it."

Extension Opportunities

In closing, I have some additional comments about the educational opportunities the environmental regulatory agenda holds for extension. Because of environmental law and regulation, the level of knowledge of law that served our parents only a few decades ago is inadequate today. People in agriculture have reached a point at which knowing environmental law is just as important in the successful management of an agricultural operation as knowing business law and economics. Here lies the challenge and the opportunity for extension.

The extension network can provide the balanced education necessary for its clientele to effectively and responsibly operate within this imposing body of environmental law and regulation and the policymaking process. I am not advocating the training of lay lawyers. I am advocating education designed to meet the challenges inherent in implementing a policy that is acceptable to both agricultural and environmental interests.

NOTES

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REFERENCES

American Farm Bureau Federation. *Clean Water Act Reauthorization*. Washington, DC, July, 1993.

Camia, Catalina. "Two Senators Propose Rewrite of Clean Water Law." *Congressional Quarterly*. June 26, 1993, p. 1652.

Carriker, Roy R. "Agriculture, Water Quality, and Public Policy." Food and Res. Econ. Dept. Pap. SP93-15. University of Florida, June, 1993.

Chemically Speaking. "The Delaney Clause Is Upheld." Gainesville, FL: Institute of Food and Agricultural Sciences/Florida Cooperative Extension Service, July, 1992, p. 2.

Chemically Speaking. "Food Safety Legislation High Priority." Gainesville, FL: Institute of Food and Agricultural Sciences/Florida Cooperative Extension Service, Feb. 1993, p. 2.

Chemically Speaking. "NAS Releases Report on Pesticides in the Diets of Infants and Children." Gainesville, FL: Institute of Food and Agricultural Sciences/Florida Cooperative Extension Service. July, 1993. 2 pp.

Chemical Regulation Reporter. "Bill Would Give Registrants Incentive to Support Pesticides Used on Minor Crops." 6 Mar. 1992, pp. 1710-1713.

Chemical Regulation Reporter. "Text of Decision by 9th Circuit Court of Appeals in Case Challenging EOA Interpretation of Delaney Clause." July 10, 1992, pp. 699-700.

Chemical Regulation Reporter, June 11, 1993, p. 596.

Copeland, Claudia. *Clean Water Act Reauthorization*. CRS Issue Brief. Washington, DC: Library of Congress, July 22, 1993. Corn, M. Lynne. *Endangered Species: Continuing Controversy*. CRS Issue Brief. Washington, DC: Library of Congress, June 22, 1993, "Summary."

Eckel, Keith W. "Clean Water For America." Statement of American Farm Bureau Federation to the House Public Works and Transportation Subcommittee On Water Resources and Environment Regarding Clean Water Act Reauthorization, Washington, DC, April 22, 1993.

Fentress, Robert D. "Nonpoint Source Pollution, Groundwater, and the 1987 Water Quality Act: Section 208 Revisited?" *Env. Law Rev.* 19(1989):807.

Harl, Neil E. *Agricultural Law*, vol. 10, p. 11-14. New York, NY: Matthew Bender & Company, 1990.

Kiplinger Agriculture Letter, 9 July, 1993.

Kirby, Paul. "Wetlands Policy Draws Criticism as Well as Praise." *The Gainesville Sun*. 26 Aug. 1993, p 1B.

Krause, Rick, and Jim Porterfield. *American Farm Bureau Federation Analysis of S. 1114—Clean Water Act Reauthorization*. Unpublished draft. Chicago, IL: American Farm Bureau Federaion, 1993.

Miller Jeffrey G. "Private Enforcement of Federal Environmental Laws: The Emerging Role of Citizen Suits." *Environmental Analyst*, Dec. 1984, pp. 7-11.

Nesheim, Norm. Personal communication as Pesticide Information Coordinator—State of Florida. Personal Communication, Sept. 7, 1993.

Pesticide & Toxic Chemical News. "Grade Changes Unlikely to Reduce Pesticide Usage: Study," Nov. 4, 1992, pp. 26-27.

Pesticide & Toxic Chemical News. "Delaney Tolerance Revocations," June 30, 1993, p. 26.

Pesticide & Toxic Chemical News. "Pesticide Policy To Undergo 'Dramatic Shift,' Browner Cites." July 14, 1993, p. 18.

S. 1114. *Water Pollution Prevention and Control Act of 1993*. 103rd Congress, 1st session, June 15, 1993.

S. 1304. *Wetlands Conservation and Regulatory Improvements Act*. 103rd Congress, 1st session, June 15, 1993.

Thunberg, Eric M. *Coastal Zone Management: A Federal Historic Perspective*. Food and Res. Econ. Dept. Staff Pap. SP93-8, University of Florida, April, 1993.

U.S. Department of Agriculture. *Agricultural Resources: Cropland, Water and Conservation. Situation and Outlook Report*. Washington, DC: ERS AR-30, May, 1993, p. 37.

U.S. Environmental Protection Agency. *Guidance Specifying Management Measures For Sources Of Nonpoint Pollution In Coastal Waters*. Washington, DC: Office of Water Pub. 840-B-92-002, January 1993.

Vogt, Donna U. *Food Safety: Issues and Concerns Facing Congress*. CRS Issue Brief. Washington, DC: Library of Congress, July 15, 1993.

Womach, J. *Pesticide Policy Issues in the 103rd Congress*. CRS Issue Brief. Washington, DC: Library of Congress, June 15, 1993.

Zinn, Jeffrey A., and Claudia Copeland. *Wetlands Issues in the 103rd Congress*. CRS Issue Brief. Washington,DC: Library of Congress, May 11, 1993.

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IMPACTS OF REDUCED PESTICIDE USE ON THE PROFITABILITY OF THE FRUIT AND VEGETABLE SECTOR

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The fruit and vegetable industry has become a focal point for policy decisions relating to minor-use pesticides. Of all agricultural segments, fruits and vegetables are being the most profoundly affected by policy changes mandated by the courts requiring interpretation of the zero tolerance provisions of the Delaney clause. Ironically, economic research on the tradeoffs involved in reduced pesticide use is seriously lacking.

Most studies of the implications of reduced pesticide use deal with the implications of taking an individual chemical off the market. This orientation results from the requirement under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) that the costs of licensing a pesticide be weighed against the benefits. The major benefit from pesticide use is the increased yield experienced by farmers, the improved ability to store produce, and the increased availability of domestic products to consumers throughout the year. The costs relate to environmental concerns such as the impact on health. For example, a recent National Academy of Science study explores the impacts that pesticide residues have on infants and children (National Academy of Sciences, 1993).

To date, for most individual pesticides there are substitute pesticides that can be used when and if they are withdrawn from the market. Therefore, the withdrawal of a pesticide has not, as a general rule, meant the product could not be produced or could only be produced in the absence of a means of controlling particular pests. However, after years of winnowing down the number of pesticides registered, questions of the availability of any chemicals to control particular pests have become more real. Significant forces impacting the registration and availability of pesticides could converge during this decade to bring seeds of change that will likely affect American agriculture and the nation's food supply for years to come. These forces include the following:

- All pesticides registered before 1984 should be reregistered by 1997, holding the potential for eliminating use of many pesticides that control pests and disease on fruits and vegetables.

- FIFRA, under which cost/benefit standards and requirements for the registration of pesticides are established, must be reauthorized.
- The Ninth Circuit Court of Appeals decision enforcing a zero-tolerance Delaney standard of the Federal Food, Drug, and Cosmetic Act for processed foods must be rationalized against the reduced supply and availability of fruits and vegetables resulting from strict application of Delaney. The Clinton administration has proposed a negligible risk alternative.
- The Clean Water Act and Endangered Species Act, both of which can affect the use of pesticides generally or on specific lands, must be reauthorized.
- The results of studies such as that of the National Academy of Sciences, which express caution about diet as an important source of pesticides (particularly in infants and children), must be reconciled by finding a satisfactory balance between the level of risk and the public's need for a varied diet and a plentiful supply of fresh fruits and vegetables.

Objective and Methodology

The objective of this study is to quantify the supply, availability and cost consequences of reduced pesticide use on fruit and vegetable crops. The nine crops analyzed include potatoes, oranges, tomatoes, grapes, apples, lettuce, onions, sweet corn and peaches. These crops represent approximately 82 percent of the 1992 value of U. S. production for major fruit and vegetable crops.

The yield estimates used in this analysis were provided by leading university horticultural scientists in the major production areas (a total of 19 regions) associated with each crop. Each horticultural scientist specified current cultural practices as a baseline and indicated changes in cultural practices associated with each individual pesticide-use-reduction option. These cultural practices could, for example, include increased use of labor to control weeds or sorting out inferior quality products unacceptable to the market, but were designed to minimize the yield losses.

The cost impacts generally were estimated by a separate horticultural economist using the yield and cultural practice information provided by the horticultural scientist. The economist was responsible for developing the baseline budget reflecting cultural practices currently used in commercial production of the crop.

This baseline budget only included the cash costs involved in producing and harvesting a crop. The baseline budget was then adjusted for each pesticide-reduction scenario to account for the changes in cultural practices specified by the horticulturist making the yield estimates. Impacts, on a cash cost per pound basis, could then be calculated from the yield- and cost-per-acre information for each reduced-chemical-use scenario. This cash cost per pound of *commercially acceptable* production is a conservative estimate of the changes in total cost since it does not recognize any increases in overhead, management or capital replacement costs that would be associated with reduced pesticide use.

The specific scenarios analyzed for each crop included eight pesticide-use-reduction alternatives in addition to the baseline. Four of these scenarios involved complete elimination of the following:

- Pesticides, including the combination of herbicides, insecticides and fungicides.
- Herbicides, including growth regulators.
- Fungicides, including fumigants.
- Insecticides, including natural, synthetic, biological and chemical methods of control.

Each of these four scenarios was then modified to involve an approximate 50 percent reduction in the *number of pesticide applications*. Because of the choices that had to be made by the lead scientist in accomplishing the 50 percent reduction, the 50 percent target is only an approximation. If only one application of a particular pesticide was used in the baseline, for example, this option would not be applicable (NA) unless the lead scientist specified an alternative means that would reasonably accomplish a 50 percent reduction.

Overall Results

The yield and cost impacts generally were substantial but highly variable among regions and crops. The fresh market tended to experience larger yield reductions than the processed market. If the goal of public policy were to reduce pesticide applications by 50 percent, for example, average yields would be expected to fall by about 20 percent for processing vegetables and 42 percent for fresh vegetables. If pesticide applications were eliminated, fresh vegetable yields would experience a 76 percent decline, while processed vegetable yields would decrease 45 percent. Fresh vegetables, therefore, would suffer the greatest yield reduction in the first 50 percent reduction in pesticide use. For processed vegetables, the greater yield reductions would lean marginally toward the second 50 percent reduction in pesticide applications.

The vegetable generalizations appear to apply only partially in the case of fruits. Fruits produced for the fresh market would experience greater yield reductions (79 percent) in the absence of pesticides than those produced for the processed market (68 percent). When pesticide applications are reduced by 50 percent, yields of fresh fruit decline by 40 percent while those for processed fruit decline by 35 percent. Thus, severity of yield losses for fruits would tend to be split between the first and second 50 percent cut in pesticide use rather than favor one or the other. In other words, the yield reduction "curve" could be concave, convex or linear depending on the pesticide option.

Sweeping pesticide-use reduction involving more than one pesticide category would have more adverse (synergistic) impacts on yield than strategies targeted toward particular pesticides. Stated differently, pesticide-reduction strategies that simultaneously decrease the use of herbicides, fungicides and insecticides would have more adverse impacts on yields because fungi and insects would tend to be more prolific in the presence of weeds.

Issues Impacting Profitability

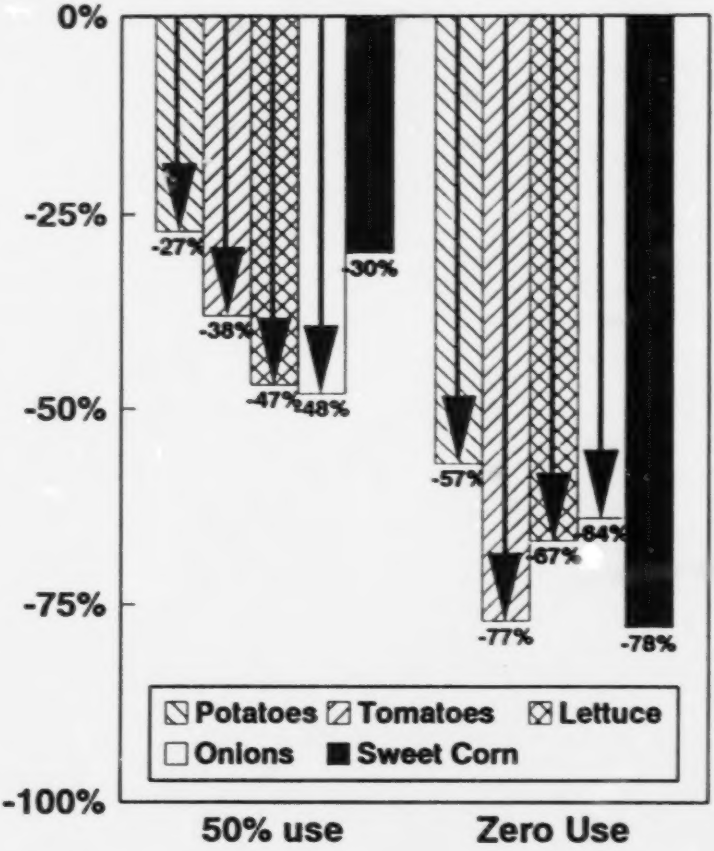
This study clearly reveals several complex issues impacting profitability of fruit and vegetable production that would be associated with the decision to reduce pesticide use. In some cases, such as yields and costs, it is possible to estimate the magnitude of those trade-offs. In other cases, the trade-offs can only be identified as being an important and substantial consideration in the decision to reduce pesticide use. Some of these trade-offs apply to all crops while others appear to be crop specific.

Marketable Yields

As indicated previously, reduced pesticide use would mean lower commercially marketable yields and this would affect fresh market products to a greater degree than processed products. For all the crops and regions analyzed in this study combined, the weighted average yield reduction would be an estimated 70 percent with no pesticides and 37 percent with a 50 percent reduction in applications. Figures 1 and 2 illustrate the reductions in yield associated with each individual fruit and vegetable crop when weighted by the value and sales that the study regions represented.

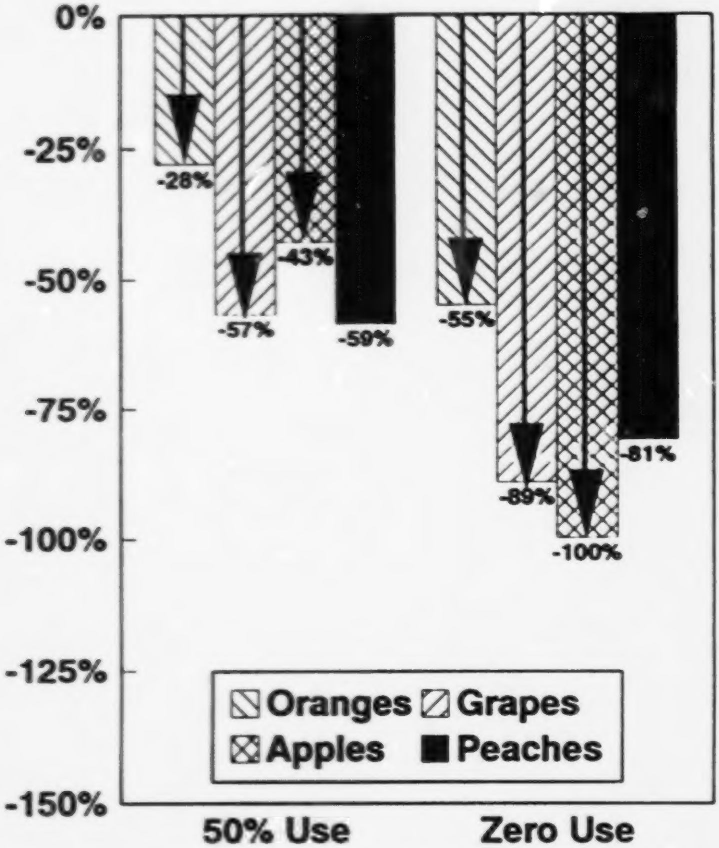
The amount of yield reduction would vary, however, by crop, pesticide and combinations of pesticides (Table 1). For example, sixteen (11 percent) of the one hundred and fifty-two total pesticide-reduction scenarios (nineteen regions with eight scenarios each) would result in total crop wipeout (100 percent crop loss). That is, no crop (NC) would be produced without the use of a particular pesticide. Additionally, there were six other scenarios in which the reductions in yield were estimated to be 70 percent or greater. Among those crops and regions most adversely affected were Maine potatoes, California grapes, Florida tomatoes, Washington and Michigan apples, Florida sweet corn and Georgia/South Carolina peaches. For these crops, the impacts are greater in cases in which

Figure 1. Reduction in Yield Resulting From No Pesticides and a 50 Percent Reduction in Pesticide Applications for Vegetables.*



*Percentages represent a weighted average by the value of producer sales for the states included in the study. In the cases where only one application prevented a 50% use scenario, the yield reduction was approximated at 50% of the zero use impact.

Figure 2. Reduction in Yield Resulting From No Pesticides and a 50 Percent Reduction in Pesticide Applications for Fruits.**



**Percentages represent a weighted average by the value of producer sales for the states included in the study. In the cases where only one application prevented a 50% use scenario, the yield reduction was approximated at 50% of the zero use impact.

Table 1. Summary of yield reductions per acre and percentage change in total costs per pound for fresh and processed fruits and vegetables, 1992.

	Yield reductions per acre (%)								Percentage change in total cost per pound							
	Herbicides		Fungicides		Insecticides		Pesticides		Herbicides		Fungicides		Insecticides		Pesticides	
Crop	Zero use	50% use	Zero use	50% use	Zero use	50% use	Zero use	50% use	Zero use	50% use	Zero use	50% use	Zero use	50% use	Zero use	50% use
Potatoes																
Idaho	30%	15%	15%	10%	25%	NA	50%	20%	59.69%	19.95%	17.33%	7.92%	35.60%	NA	109.87%	30.69%
North Dakota	30%	15%	50%	15%	50%	25%	65%	35%	67.14%	30.66%	107.31%	13.26%	67.85%	26.20%	202.83%	84.34%
Maine	25%	15%	100%	25%	50%	10%	100%	70%	59.79%	23.10%	NC	36.08%	112.86%	11.27%	NC	289.65%
Oranges																
Florida	0%	0%	50%	17%	15%	8%	63%	25%	17.68%	0.53%	34.45%	6.59%	1.85%	1.04%	91.86%	9.48%
California	15%	15%	25%	24%	0%	0%	36%	35%	14.70%	5.96%	30.65%	32.01%	−7.41%	−3.70%	33.54%	33.55%
Tomatoes																
Florida	27%	NA	70%	28%	100%	30%	100%	50%	17.80%	NA	63.36%	14.26%	NC	18.17%	NC	36.02%
California	25%	10%	10%	4%	22%	9%	37%	17%	81.14%	29.31%	12.84%	5.81%	31.41%	12.35%	112.99%	48.57%
Grapes																
California	50%	25%	97%	44%	56%	36%	99%	68%	20.44%	13.74%	1475.32%	55.80%	61.70%	27.01%	3045.56%	114.53%
New York	12%	5%	37%	12%	10%	4%	59%	21%	21.51%	7.75%	70.69%	4.50%	11.28%	3.23%	140.42%	17.32%
Apples																
Washington	20%	15%	6%	3%	100%	14%	100%	30%	68.22%	17.87%	9.11%	4.41%	NC	22.90%	NC	49.20%
Michigan	60%	30%	100%	90%	100%	75%	100%	100%	185.93%	47.49%	NC	509.55%	NC	163.56%	NC	NC
Lettuce																
California	13%	NA	47%	27%	53%	13%	67%	47%	14.46%	NA	35.57%	18.57%	36.10%	7.40%	84.55%	42.06%
Onions																
Idaho	46%	15%	20%	NA	12%	8%	60%	45%	58.89%	17.59%	2.43%	NA	9.29%	4.46%	57.69%	23.50%
California	35%	25%	30%	10%	10%	NA	60%	45%	37.65%	20.01%	17.98%	5.82%	2.71%	NA	66.51%	37.27%
Texas	25%	10%	60%	40%	40%	15%	80%	60%	24.24%	10.01%	49.34%	27.35%	28.17%	8.81%	134.31%	68.74%
Sweet Corn																
Florida	8%	NA	60%	20%	100%	15%	100%	30%	5.16%	NA	60.19%	9.64%	NC	1.23%	NC	9.37%
Wisconsin	50%	20%	NA	NA	13%	7%	63%	30%	85.97%	22.34%	NA	NA	12.65%	9.24%	139.34%	38.21%
Peaches																
California	1%	0%	45%	30%	40%	25%	75%	45%	3.55%	0.42%	57.27%	33.21%	40.62%	20.81%	196.13%	57.61%
Georgia/S.C.	20%	0%	100%	80%	100%	60%	100%	100%	7.74%	0.96%	NC	124.74%	NC	45.93%	NC	NC

NA = Not Applicable (situation where 50% reduction was not possible because only one application is currently used)
NC = No Crop (due to 100% yield loss)

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they are used primarily for the fresh market and the crops would not be seasonally available except for imports.

There were scenarios, of course, in which the impact on marketable yields was less severe. For example, in twenty-four scenarios, the impact on marketable yield was estimated to be 10 percent or less. However, all but eight of these scenarios dealt with 50 percent reductions in applications. In other words, there were only a handful of crops in which the total elimination of a particular pesticide resulted in less than 10 percent yield reduction. These cases included: a) the application of herbicides on Florida oranges, Florida sweet corn and California peaches; b) the application of fungicides on California tomatoes and Washington apples; and c) the use of insecticides on California oranges, New York grapes and California onions.

Costs

Per unit costs of production would increase if pesticide use were reduced (Table 1). This would happen even if the cost of production per acre were to fall because the yield invariably would fall by a greater percentage than the cost per acre. In many cases, however, the cost per acre also would [illegible] because of increases in cultivation and/or labor costs. There were seventeen scenarios in which the estimated cash costs per pound more than doubled from the reduction in pesticide use. Another seven cases were estimated to result in per pound cost increase of 80 percent or higher. The existence of higher unit costs with less use of pesticides seems reasonable since farmers would never have adopted pesticides in the first place without a cost benefit.

Prices/Imports

Because a large number of growers compete in markets for fruits and vegetables, they do not have the power to "pass on" increases in cost. Over time, however, less production and higher costs would mean higher prices. In the long run, the price increase would be at least as much as the cost increase. In the short run, the price increase might be much more than the cost increase because the demand for fruits and vegetables is believed to be quite inelastic, which means that a small percentage reduction in supply would result in a larger percentage increase in price.

However, the price effect depends on U.S. policy regarding imports. Higher prices in the United States combined with the periodic lack of supplies due to reduced pesticide use would also mean a higher proportion of the U.S. fruit and vegetable supply would have to be imported in order to meet current consumer demand, particularly for those crops in which a total crop wipeout (100 percent loss) was estimated to occur. All of the crops studied have viable alternative sources of supply. In addition, the United States has little control over pesticide use in the supplying countries.

Product Appearance, Quality, and Perishability

Most consumers will not buy corn or apples if worms or maggots are present in them. Even if some purchases were to be made, waste and spoilage would increase as perishability increased and product turnover in the grocery store declined. Spoilage means even higher costs.

Likewise, processed products have less appeal with increased insect parts and greater potential spoilage. Processed product tolerances for insect parts would almost certainly have to be increased with substantially reduced pesticide use. Costs of processing would likewise rise as processing plants attempted to maintain quality through increased product sorting.

Exports

Higher prices in the United States due to reduced pesticide use would suggest a marked reduction in U.S. ability to compete in the international fruit and vegetable market. Several of the lead horticultural scientists and economists mentioned the inevitable loss of export markets as a result of lower pesticide use. This loss of markets would not only be a result of the lack of competitiveness on the basis of price and cost but also a result of rejection by customer countries because of increased insect parts in either fresh or processed products. The countries that buy our fruits and vegetables have phytosanitary regulations that prevent lower-quality products from entering.

Labor

Although the reduced use of pesticides would contribute to a national goal of employing more labor, the labor supply required to grow crops without pesticides may not be readily available under any circumstances. History has shown that it is difficult to attract labor to agriculture.

Production without pesticides would reduce the use of mechanical harvesting equipment due to reduced product quality. If products such as tomatoes or sweet corn were damaged and softened by insect infestation, further damage by mechanical harvesting would render the product unusable. In the absence of an adequate labor supply, the result could be even lower yields of marketable crops than those indicated in this study.

Land and Water Utilization

It is well-known, but not generally recognized, that pesticides are resource-conserving. About 5.83 million acres of land is being used for fruit and vegetable production in the United States. Because pesticide use results in higher yields, less land is required for farming.

Based on the results of this study, however, land requirements could easily increase by 40 to 50 percent if pesticide use were eliminated. These additional acres would be required to meet market demands, but the acreage would have to come from land devoted to other crops or from more fragile lands not in production.

If more land were placed in production, more water would be required for irrigation, particularly if the loss of herbicides allowed weeds to compete with crops for water. More weeds also would mean more rodents, a pest notorious for spreading disease. With more weeds in the fields, growers would be forced to use more cultivation to control weed growth, and more cultivation would mean more soil erosion.

Management and Size of Farms

This study assumes management is a fixed expense. Although considerable management skills are employed when pesticides are used on a regular basis, greater management skills and time would be required if the level of pesticide use were to decline. In other words, pesticide use reduces the requirements for one of agriculture's most scarce resources—management skill.

If pesticide use were to decline and growers were faced with low yields, farm size probably would increase as growers tried to meet market demands by farming more acreage. Few farm managers would have the required management skills to farm under reduced chemical systems. This scenario is contrary to conventional wisdom, which maintains that reduced pesticide use would mean a return to small farms.

Implications for Policy Decisions

Because of the large yield reductions generally experienced and related cost increases, and the potential for imports, it becomes clear that farm profitability is directly impacted. The magnitude of that impact depends on, more than anything else, on the policy toward imports.

This study follows an earlier study (Knutson, et al., and Smith et.al.) that used similar methodology to evaluate the impact of pesticide use reduction on the major program crops. Although the results for fruits and vegetables are similar to the program crop study, they are more dramatic in that some fruit or vegetable crops would be completely wiped out in certain regions as a result of the absence of pesticides. Of course, this would not only have severe short-run effects on individual farm profitability and survival, but would also impact the long-run competitiveness of the produce industry.

The major difference between this study and the earlier study is the inclusion of a 50 percent pesticide-reduction option for fruits and vegetables. The results suggest that a substantial variation exists from crop-to-crop regarding whether the largest incidence of yield reduction would occur in the first 50 percent decrease or in the final 50 percent. There are situations in which the 50 percent reduction would be possible for some crops in some regions, but broad sweeping legislation would not achieve this goal with being detrimental to other major production regions.

The need to proceed with caution on policies involving the elimination or substantial reduction of pesticides was a primary emphasis in the earlier study of major program crops. This emphasis is even more important in a study of fruits and vegetables because the number of pesticide options is often very limited and the potential yield reductions are large and sometimes even dramatic.

Further research and technological innovations will be required before significant reductions in pesticide use will be possible without substantial yield reductions and large cash cost increases. The nation's policymakers will likely want to consider all economic, environmental, nutritional and social tradeoffs as they consider pesticide policy changes that will impact every link of America's food chain for years to come.

REFERENCES

Knutson, Ronald D., C. Robert Taylor, John B. Penson, and Edward G. Smith. Economic Impacts of Reduced Chemical Use. College Station, TX: Knutson and Associates, May, 1990.

National Academy of Sciences. *Pesticides in the Diets of Infants and Children*. National Research Council report. Washington, DC: June 28, 1993.

Smith, Edward G., Ronald D. Knutson, C. Robert Taylor, and John B. Penson. Impacts of Chemical Use Reduction on Crop Yields and Costs. College Station, TX: Texas Agricultural Experiment Station and Tennessee Valley Authority, Sept. 1990.

IMPACTS OF EPA DAIRY WASTE REGULATIONS ON FARM PROFITABILITY

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With the initiation of dairy waste regulatory activity in Texas and Florida during the early 1990s, questions have arisen regarding the impacts of these regulations if extended throughout the United States. The Agricultural and Food Policy Center (AFPC) system of representative dairy farms provided a unique opportunity to evaluate the impacts of these regulations on dairy farm profitability if extended to all other states.

EPA Dairy Waste Policy

With the exception of concentrated animal feeding operations (CAFOs), agriculture has been treated as a nonpoint source of pollution. Nonpoint pollution means there is no legally recognized identifiable source of that pollution. Point pollution, on the other hand, can best be illustrated by an industrial plant or a sewer system that drains directly into a river or stream, leaving no question regarding the source of that pollution. The requirement has been that such point sources of pollution internalize the cost of cleaning up the discharge except under extremely unusual and basically uncontrollable circumstances. Such point sources of pollution must receive a permit explaining measures taken to prevent illegal discharges.

Concentrated animal feeding operations have been identified as a point pollution source because, in the eyes of the regulatory authorities, they are much like a factory. The issue becomes one of defining a CAFO. The Environmental Protection Agency (EPA) currently requires a discharge permit for any dairy having more than 700 cows. The permit will be issued if the dairy farmer demonstrates he or she has taken steps to contain pollutants and prevent discharges up to a twenty-five-year/twenty-four-hour storm event. If there is already an identifiable direct discharge, the threshold for receiving a permit may extend to 200 cows or even less, if a complaint is received by the EPA. The requirements for receiving a permit are more stringent for new operations than they are for existing operations.

In most states, EPA regulations are enforced by state environmental regulatory agencies under what is called delegated authority (Table 1). The requirement for a state to receive delegated authority

Table 1. Delegated and Nondelegated EPA Regulated States, by EPA Region.

EPA Region	Delegated	Nondelegated
I	CT, RI, VT	MA, ME, NH
II	NJ, NY[a]	[b]
III	DE, MD, PA, VA, WV	DC
IV	AL, GA, KY, MS, NC, SC, TN	FL
V	IL, IN, MI, MN, OH, WI	
VI	AR	LA, NM, OK, TX
VII	IA, KS, MO, NE	
VIII	CO, MT, ND, UT, WY	SD
IX	CA, HI, NV	AZ[c]
X	OR, WA	AK, ID

[a] The Virgin Islands are delegated.

[b] Puerto Rico is nondelegated.

[c] None of the Pacific Islands in Region IX are delegated.

is that its regulations are *at least* as stringent as the federal EPA standards. The twelve states and the District of Columbia that do not have delegated authority experience a considerably higher level of EPA supervision and involvement even though they may have a state level counterpart to the federal EPA. Texas and Florida are both non-delegated states which, to a degree, contributed to these states becoming "test cases" in the establishment of EPA dairy waste regulatory policy.

The authors completed a survey of state environmental protection agencies to determine their regulatory strategy regarding the dairy waste issue. This survey found substantial variation among states in enforcement strategy regarding dairy waste. Some states interpreted the spirit of the EPA policy as being one of no discharge except under extreme circumstances. Thus, Minnesota, in an effort to protect its 10,000 lakes from pollution, has adopted a seven-cow threshold for the receipt of permits by dairy farmers. On the other hand, Wisconsin, Iowa and Vermont interpret the EPA 700-cow policy literally. That is, with no dairies having more than 700 cows at the time of the survey, they had issued no permits.

The EPA regional offices indicated to the authors an intent to move in the direction of using the evolving Region VI policy as the standard for controlling dairy waste. This would require all dairies to develop a waste management plan that meets the twenty-five-year-storm-event criterion. In addition, dairies would be required to keep records on handling and discharging dairy wastes.

Costs of Meeting EPA Regulations in Texas and Florida

Coincidentally, the AFPC representative dairy farms in Texas and Florida were developed before the EPA policies on dairy waste management were implemented. Recently, these farms have been updated after the farms had been renovated and retrofitted to meet the new EPA standards. This provided a perfect environment for determining a before/after context in the costs of meeting the EPA regulations. The findings are presented in Table 2. Part of the farm-to-farm variation in costs is reflected in the extent to which the farms had already dealt with the waste management issue. The $528,000 investment required of the large Florida dairy (FLLD) was the result of the unique conditions and requirements to curb the contamination of fragile waters related to the Everglades.

Using the FLIPSIM policy simulation model developed by James Richardson at Texas A&M, the authors simulated the impacts of the new, more stringent EPA policies on the profitability of Texas and Florida representative farms (Table 3). In this table, *Base* represents the baseline net costs income prior to retrofitting for the EPA policies while *Enviro* indicates the results after

retrofitting. These results indicate that dairy farms having cash flow problems are simply put out of business sooner as a result of the new EPA requirements. On the other hand, the larger profitable East Texas dairy (TXEL) and the Central Texas dairy (TXCL) were sufficiently profitable to pay off the amortized debt resulting from the new investments.

While the moderate-size Florida dairy (FLMD) reflects the same pattern of results as the Texas dairies of comparable size, the large Florida dairy (FLLD) represents a case in which the EPA investment requirements were so large that its ability to cash flow is placed in jeopardy. This was the only case in which a large and otherwise profitable dairy is projected to encounter cash flow problems due solely to the EPA regulations. This result, in part, is a consequence of the large investments required ($528,000) to build the unique waste containment structures.

Table 2. Incremental Environmental Costs Obtained from Texas and Florida Dairy Producers.

Number of cows	TXCM 300	TXCL 720	TXEM 200	TXEL0 812	FLMD 350	FLLD 1500
Dirt and concrete work ($)[a]	40,600	60,000	7,000[e]	35,000	0	528,000
Machinery and equipment ($)[b]	6,000	46,000	0[e]	50,000	10,000	72,000
Annual maintenance ($)[c]	0[d]	0[d]	5,000[d]	0[d]	1,200	25,000

[a] Dirt and concrete work includes the cost of constructing or renovating a drainage pit, retention lagoon and storage lagoon.

[b] Machinery and equipment includes the cost of any additional pumps and irrigation equipment required and was not previously in the equipment complement of the dairy.

[c] Annual maintenance costs include lot cleanup, pumping, and additional repair and maintenance costs.

[d] For these dairies, the annual maintenance was included in the cost of hired labor and could not be easily separated, except for the moderate-size East Texas dairy which contracted annual lagoon cleaning and maintenance.

[e] The moderate East Texas (TXEM) dairy was only required to update existing equipment and facilities.

Table 3. Analysis of the Environmental Compliance Costs for Dairy Farms Assuming Continuation of the FAPRI January 1993 Baseline, Central and East Texas and Florida.

	TXCM		TXCL		TXEM		TXEL		FLMD		FLLD	
	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO
Average Change in Real Net Worth (%)	-33.32	-34.86	60.65	59.94	-36.02	-41.09	20.54	19.69	-45.75	-47.06	-5.24	-26.29
Average Annual Ratio Expense/Receipts (%)	101.38	101.91	80.05	80.14	108.71	109.71	86.62	86.80	101.70	101.94	95.43	97.32
Average Present Value End Net Worth ($1000)	483.0	471.91	3271.04	3256.46	340.09	313.13	3241.25	3218.42	529.01	516.20	3330.08	2590.30
Average Annual Cash Receipts ($1000)	692.28	692.28	2063.96	2063.96	487.63	487.63	2167.21	2167.21	1035.94	1035.94	4332.08	4332.08
Average Annual Cash Expenses ($1000)	701.36	705.03	1651.40	1653.34	529.52	534.41	1875.69	1879.67	1053.34	1055.89	4133.50	4215.43
Average Annual Net Cash Income ($1000)	-9.08	-12.75	412.56	410.63	-41.89	-46.79	291.52	287.54	-34.12	-37.94	164.95	73.25
Average Annual Net Cash Income ($1000)												
1992	7.51	7.51	408.25	408.25	-23.36	-23.36	307.61	307.61	2.58	0.06	206.65	171.72
1993	-8.70	-12.34	358.48	352.50	-40.15	-45.91	223.02	220.06	-6.92	-10.43	200.00	115.67
1994	-2.49	-7.30	448.04	441.54	-40.82	-47.28	296.78	289.56	-8.60	-12.37	254.48	162.25
1995	-32.65	-38.86	374.30	373.31	-63.23	-70.60	245.97	239.61	-66.58	-70.63	53.89	-48.61
1996	405.99	405.8	291.96	286.45	-59.84	-64.20	108.63	-3.69				
1997	417.82	417.82	316.17	312.49	-65.35	-70.08	166.05	42.17				

Change in Real Net Worth—Percentage change in real net worth over the simulation period, 1992-1997.
Average Annual Ratio of Expenses to Receipts—Ratio of all cash expenses to all farm receipts including government payments.
Present Value Ending Net Worth—Discounted value of net worth in the last year simulated.
Annual Cash Receipts—Total cash receipts from crops, dairy, livestock, government payments and other farm related activities.
Annual Cash Expenses—Total cash costs for crops, dairy and livestock production, including interest costs and fixed cash costs; excludes depreciation.
Annual Net Cash Income—Total cash receipts minus total cash expenses; excludes family living expenses, principal payments and costs to replace capital assets.

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Extension to Dairies in Other States

In an effort to help Texas dairies assess their investment requirements for meeting EPA Region VI standards, Lacewell and Schwart developed a model designed to estimate the costs of meeting the EPA standards under alternative animal concentration, soil and rainfall conditions. This model was used to estimate the costs of meeting the more stringent EPA standards for AFPC representative dairy farms in other regions (Table 4). These cost estimates should be treated as rough approximations since labor and machinery costs in other states may be outside the range used to develop the Texas model. The investment requirements ranged from slightly more than $21,000 for the 50-cow Wisconsin dairy ($10,581 + $10,518 for WIMD) to nearly $42,000 for the 186- cow Vermont dairy.

Of substantial significance is the requirement that approximately every five years, solids had to be cleaned out of the lagoon at a lump sum cost ranging from nearly $600 for the moderate-size Missouri dairy (MOMD) to more than $17,000 for the large Vermont dairy. This periodic cost could become a significant factor in farm prosperity and survival.

Table 5 presents the net cash income simulation results for the dairies on which investment and cost requirements were made as indicated in Table 4. These results generally indicate that dairies having no problems cash flowing before retrofitting to meet the EPA standards will be able to pay off the resulting costs without encountering financial problems. However, dairies that are already having problems cash flowing, such as the Vermont dairies, will experience even greater problems. For dairies experiencing cash flow problems, the EPA regulations could be the decisive factor resulting in an exit decision.

Implications

EPA regulations are often criticized by farmers and their organizations as being unrealistic and as creating havoc on the farm. This analysis suggests that this criticism may not be true for the vast majority of dairies that are currently relatively profitable. However, if a dairy is already experiencing cash flow problems, compliance with EPA regulations could push this farm over the brink into financial failure. Such farmers would probably find it desirable to minimize their losses and exit the dairy industry.

Dairy farmers that are bringing their farms into compliance with the new EPA standards could find it desirable to expand their dairy operations simultaneously. Such expansion may involve conversion to different farm structures such as free stall confinement housing on a concrete slab. The related investments are substantially larger than those estimated in this study for simply meeting the EPA standards on an existing operation. Such large investments may lead to

Table 4. Cost Assumptions Utilized in the Analysis of Impacts of Environmental Regulations.

Number of cows	MOMD 65	GAMD 160	GALD 600	WAMD 160	WIMD 50	WILD 175	NYCM 100	NYCL 175	VTMD 70	VTLD 186
Dirt and concrete work ($)[a]	14,499	1,440	4,844	25,283	10,581	27,904	17,710	28,195	13,839	30,335
Machinery and equipment ($)[b]	10,516	3,574	5,569	10,110	10,518	12,558	11,538	12,303	10,518	12,418
Annual maintenance ($)[c]	844	0[e]	23,064	1,720	335	1,140	790	1,374	561	1,467
Year 5 Lagoon cleanup ($)[d]	589	242	909	7,345	4,591	16,068	9,181	9,181	3,214	17,077

[a] Dirt and concrete work includes the cost of constructing a drainage pit, retention lagoon and storage lagoon.

[b] Machinery and equipment includes the cost of any additional pumps and irrigation equipment that is required and was not previously in the equipment complement of the dairy.

[c] Annual maintenance costs include lot cleanup, pumping and additional repair and maintenance costs.

[d] Year 5 lagoon cleanup is a one-time charge for custom hiring the cleanup of the retention lagoon.

[e] An annual maintenance of $4,000 was incorporated into the baseline scenario.

Table 5. Analysis of the Environmental Compliance Costs for Dairy Farms Assuming Continuation of the FAPRI January, 1993 Baseline, Wisconsin, Vermont, New York, Washington, Missouri and Georgia.

	WIMD		WILD		VTMD		VTLD		NYCM		NYCL		WAMD		MOMD		GAMD		GALD	
	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO	BASE	ENVIRO
Average Change in Real Net Worth (%)	7.44	6.04	37.10	35.80	-25.91	-30.82	-16.48	-21.10	-9.75	-12.41	22.24	20.69	-45.16	-47.64	7.35	5.18	-35.58	-43.89	-6.29	-18.51
Average Annual Ratio Expense/Receipts (%)	51.41	53.68	64.14	65.03	88.32	89.94	92.64	94.11	81.49	83.06	74.66	75.82	93.58	94.70	71.66	72.96	96.55	98.67	94.57	96.78
Average Present Value End Net Worth ($1000)	346.93	342.40	1195.70	1184.35	280.76	262.15	749.99	708.59	520.04	504.71	921.34	909.68	237.19	226.47	385.74	377.96	322.67	281.03	1117.69	971.87
Average Annual Cash Receipts ($1000)	125.53	125.53	499.98	499.98	218.24	218.24	525.46	525.46	297.12	297.12	506.58	506.58	489.58	489.58	221.47	221.47	435.50	435.50	1768.42	1768.42
Average Annual Cash Expenses ($1000)	64.51	67.36	320.55	325.04	192.66	196.20	486.59	494.32	241.91	246.54	377.87	383.72	457.94	463.38	158.67	161.56	420.41	429.63	1672.12	1711.18
Average Annual Cash Income ($1000)	61.03	58.18	179.43	174.94	25.58	22.04	38.86	31.13	55.21	50.58	128.72	122.87	31.64	26.20	62.80	59.90	3.02	-12.04	54.30	1.86
Average Annual Net Cash Income ($1000)																				
1992	57.75	57.75	170.87	170.87	33.86	33.86	55.75	55.75	58.08	58.08	125.06	125.06	40.84	40.84	60.52	60.52	16.14	6.17	90.80	53.80
1993	54.39	53.02	160.08	156.20	24.49	22.74	32.15	28.22	47.32	45.07	107.35	103.69	25.5	21.64	58.04	56.03	11.53	-2.84	63.37	15.39
1994	61.78	59.23	184.31	179.04	30.13	27.16	48.24	42.79	60.04	56.49	133.27	128.09	42.24	37.18	63.84	60.72	16.09	1.03	93.46	42.37
1995	58.56	55.92	172.20	169.91	22.60	19.15	28.44	22.76	54.21	50.41	119.24	113.79	24.84	19.54	58.50	55.20	-7.94	-23.76	21.69	-31.73
1996	62.58	59.89	192.58	191.29	25.84	21.52	35.77	29.56	61.27	57.22	135.37	130.27	33.74	28.59	64.67	61.14	-10.05	-27.08	32.36	-27.13
1997	64.07	56.68	182.17	164.81	19.17	11.89	33.38	9.31	51.49	38.14	134.98	120.10	25.09	12.45	64.89	60.61	-7.67	-25.78	24.13	-41.57

Change in Real Net Worth—Percentage change in real net worth over the simulation period, 1992-1997.
Average Annual Ratio of Expenses to Receipts—Ratio of all cash expenses to all farm receipts including government payments.
Present Value Ending Net Worth—Discounted value of net worth in the last year simulated.
Annual Cash Receipts—Total cash receipts from crops, dairy, livestock, government payments and other farm related activities.
Annual Cash Expenses—Total cash costs for crops, dairy and livestock production, including interest costs and fixed cash costs; excludes depreciation.
Annual Net Cash Income—Total cash receipts minus total cash expenses; excludes family living expenses, principal payments and costs to replace capital assets.

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effects on structure such as occurred roughly two to three decades ago with the requirements for bulk tanks, milk houses and related facilities. That is, we may see large numbers of dairy farm exits and quantum leaps in dairy farm size over a relatively short time period—making the results of our study appear inaccurate.

This study of dairy waste compliance has implications for all of animal agriculture. In particular, EPA waste handling requirements could be one of the factors that lead to structural change in both the hog industry and the demise of the few farmer-feeders of beef cattle that remain. That is, the most decisive effect may be those cases in which farmers, as a result of the EPA requirements, decide to restructure their operations. As a result, U.S. agriculture could experience even more rapid structural change.

ENVIRONMENTAL POLICY AND NATURAL-RESOURCE-BASED ECONOMIC DEVELOPMENT

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Environmental policy is designed to restrict and channel our uses of the environment in ways that protect environmental quality. As such, environmental policies often conflict with resource development when that development requires the use of environmental assets. It is artificial, though, to look solely at the effects of environmental policies on resource development. There are also important natural resource and other (such as tax) policies that, in some cases, encourage resource development and, in other cases, help conserve or preserve those resources. The net policy impact on resource development depends on the net effects of incentives and disincentives provided by environmental and natural resource policies.

Natural-Resource-Based Economic Development

First, it is important to define natural resource development. Is development defined as extraction and use as in the case of fossil fuels? Is development harvest and sale of a resource such as fish or timber? Or is development the preservation of a unique natural area like Yosemite National Park that annually attracts millions of visitors and makes a large contribution to the regional and national economies? The latter case would normally be called preservation, not development. However, if our criterion is economic development that is based on natural resources, the preservation of Yosemite is clearly one form of economic development of the resource that can be compared to other forms of economic development, such as harvest of the timber in the valley or use of the valley floor for cattle grazing.

The traditional classification of natural resources into exhaustible and renewable may help in understanding the meaning of development. Exhaustible resources include fossil fuels and minerals. The fundamental characteristic of an exhaustible resource is that its supply is fixed in the physical sense at any point in time, and new supplies cannot be created. Exhaustible resources can be further characterized by whether they are recyclable. Fossil fuels are used up when they are burned, but many of the products of fossil fuels, such as lubricating oils, can be partially recycled. Many minerals may also be partially recycled. While exhaustible resources are fixed in physical supply, economic supply depends on market price and technology.

Renewable resources are perhaps more important to the future economic development of most regions. Like exhaustible resources, renewable resources have a fixed supply at any point in time. The difference is that if renewable resources are used in a sustainable fashion, they will replenish their supply. Current use, then, does not necessarily reduce future supply.

Some resources may be renewable for certain uses and exhaustible for others. This is particularly the case if some uses of the resource cause irreversible damages. Hiking in a forest is a renewable use of the forest as long as hiking pressure does not lead to gullying of the trail and consequent irreversible damage. However, off-road vehicle use on wetlands can and does cause irreparable damage to the wetland ecology and is incompatible with other uses such as hiking or provision of wildlife habitat.

Finally, a given use of natural resources may be considered as renewable by some people and as destructive by others. Limited logging of old-growth forests may be seen as a way to increase the timber growth and production while still preserving the forest (Sedjo). Others regard such logging as utterly incompatible with the ecological, scenic and, indeed, ethical values provided by old-growth forests.

Natural Resource and Environmental Policies

The policy debate over environmental and resource issues has broadened over time. Environmental policies are no longer solitary issues to be dealt with separately from development policies. Environmental policy is at the center of many of our most important social debates. Second, everything is related to everything else. Increased water quality restrictions may hurt one industry but increase recreation and tourism. All environmental policy decisions involve difficult tradeoffs.

Environmental Policy and Economic Development

A number of studies have attempted to gauge the overall impact of environmental regulations on the U.S. economy. Portney summarizes those studies as finding " . . . pollution control spending had a relatively minor impact on macroeconomic performance. It has exacerbated inflation somewhat and slowed the growth rate of productivity and the GNP. On the other hand, studies have found that pollution control spending appears to have provided some very modest stimulus to employment . . ." (p. 11). This is somewhat surprising, given that the Environmental Protection Agency (EPA) estimated total private spending to comply with environmental regulations from 1981 to 1990 to be $640 billion (Portney).

While studies have found that environmental policies have not had a major impact on economic growth in the aggregate economy, that is not necessarily the case when you look at specific sectors, particularly the natural resource sectors, such as mining, forestry, fisheries and recreation.

Mining

The story for mining is perhaps the simplest of the four natural resource industries. While mining is a complex industry geographically, the products produced by mining tend to be purely market goods that have value only in their use. Few people would plan their vacations around visits to pristine iron ore deposits as they might to visit a redwood forest. The policy complications for mining involve externalities that are created during the mining process, such as destruction of the landscape, air and water pollution, and environmental problems associated with processing and use. The social and policy choice for mining is to balance the economic value of the product, including the regional economic contributions made by extraction and use, with the environmental costs of extraction and use.

As an example of the policy trade-offs involved in mining, the Clean Air Act of 1990 has significantly strengthened regulation of emissions of sulfur dioxide to reduce acid precipitation. Because coal supplies approximately 40 to 70 percent of man-made sources of sulfur dioxide (James) the coal industry will be affected by the legislation.

The Clean Air Act of 1990 promises to reduce acid precipitation by one half, with much of the reduction coming from tightened restrictions on emissions of sulfur dioxide (Hunter). Electric utilities have a number of compliance options under the new regulations: switch to low sulfur coal; install scrubbers that remove sulfur from the flue gasses; switch to fluidized bed or other advanced and low polluting technologies; buy pollution rights; or switch to other fuels. All share one common attribute in addition to reducing pollution: they increase the costs of electricity production and raise its price to consumers while reducing the country's economic growth somewhat. The options are quite different, however, in their regional development effects. A switch to low sulfur coal will favor western coal producers who produce a lower BTU but much cleaner coal than their Eastern counterparts. The impact will be felt differentially in the East as well. For example, the southern part of West Virginia produces a high BTU coal that is relatively low in sulfur. That section of the state could benefit from the Clean Air Act. Producers in areas that only have high sulfur coal, such as northern West Virginia, Western Pennsylvania and parts of Kentucky and Ohio will clearly be hurt by the switch to low sulfur coal. One study estimates the Clean Air Act of 1990 will result in the loss of 2,000 jobs in northern West Virginia while the southern part of the state will gain about 4,500 jobs (Hunter).

Forestry

Forestry is a more complex natural resource industry than mining. Forests supply a number of marketed products and services such as timber that make a direct contribution to the economy. But the standing forest itself produces economic and other values, such as provision of wildlife habitat, watershed protection, erosion control and recreation generally not sold in markets, though they contribute indirectly either to the economy or to the quality of life in a region.

The major issues that involve forest development policy in the United States, currently and in the future, are environmental ones. The three most important are acid precipitation and ozone damage; endangered species and the preservation of biodiversity; and global warming.

The Endangered Species Act is probably the most controversial environmental program that affects forestry, particularly in the Pacific Northwest where timber companies are pitted against environmentalists over the fate of the remaining old growth forests. While the spotted owl has been the focus of the debate, it is really a minor actor in the overall policy issue. The primary issue is one of preserving habitat, species diversity and the old growth forests themselves versus the economic value of the timber for regional development and employment. So far, the Clinton administration has shown a willingness to compromise on the old growth issue. It seems to favor a policy that allows logging of old growth forests, but at rates lower than allowed in the 1980s, while preserving some large tracts for preservation of habitat. The keys in determining the balance between cutting and preservation are knowing exactly how much of the forest is required to provide habitat for endangered and threatened species and trading off the social values of species diversity and the value of the resource *in situ* against the value of the timber. Given the scientific uncertainty surrounding the critical size of an ecosystem to support a species, and the extreme difficulty of valuing such intangibles as species diversity, these are not simple issues to resolve.

Fisheries

The story of fisheries in the United States is complex and involves a number of related and unrelated issues. The issues include overfishing, conflicts between commercial and recreational interests, regulations that offered too little too late, pollution, international boundary disputes and the introduction of exotic species.

Commercial fishing and industries related to commercial fishing make a substantial contribution to the U.S. economy. Commercial landings alone were valued at $3.1 billion in 1987 while imports of fish and fish products were valued at $8.8 billion that year (Gordon). Recreational fishing also makes a large contribution to the U.S. economy, estimated in 1987 to be $13.5 billion (Gordon). The future of recreational and commercial fisheries in the United States depends on the quality of the resource. Unfortunately, in many important regions that quality is declining. There have been significant reductions in fishery stocks in the Georges Bank fishery in New England, the Chesapeake Bay, the Columbia River fishery in the Pacific Northwest, Lake Okeechobie in Florida, and the Gulf of Alaska.

Once the Chesapeake Bay was a valuable fishery, producing oysters, blue crabs, striped bass and numerous other species. While the blue crab fishery continues to be important, oyster catch is much reduced and the striper fishery has been closed since 1985. The story of the decline of the Chesapeake Bay involves themes of overfishing; reluctance of managers to place timely limits on catch; and damages and diseases linked to nonpoint pollution from agricultural and municipal sources.

While attempts to control point sources of pollution have greatly reduced pollution from toxic elements, pollution from nonpoint sources has not been nearly as successful. One reason for the limited success at controlling nonpoint pollution has been the reliance on voluntary programs rather than regulatory programs. This is beginning to change, with greater regulation of agricultural practices in proximity to the Chesapeake.

Outdoor Recreation

There is no doubt that outdoor recreation has been, and still is, growing in importance in the U.S. economy. Every tourist dollar spent generates approximately two and one third dollars of additional economic activity. Tourists in the United States spent approximately $272 billion in 1989, which, when accounting for multiplier effects, makes tourism responsible for 12 percent of the gross national product (GNP). By this account, tourism is the single largest industry in the United States, though it is such a heterogenous part of the economy that it is difficult to classify it as an industry (U.S. Travel Data Center). Attendance at state parks, national forests and national parks has continued to grow since World War II. Visitation at national forests and parks has grown from less than 40 million visits after the war to more than 300 million visits in 1987 (Harrington). State park attendance grew from 92 million visits in 1946 to 618 million in 1981. There are no consistent data on private recreational facilities, though it is thought that growth of this industry sector is at least as high.

Clearly, recreation is the industry that benefits the most from environmental regulations. The Clean Water Act helps improve stream and lake water quality for fishing, boating and swimming. Regulation of pesticides and restrictions on wetland conversion help preserve game habitat. The only negative effect environmental regulations have on tourism is increasing the costs of travel by increasing the costs of automobiles and fuels.

While outdoor recreation continues to grow, that growth rate is falling. The leisure time available to most Americans has declined rapidly, falling around 37 percent from 1973 to 1988 (Cordell). Leisure time has fallen because of the growth in two-wage-earner families, increased commuting time and increased time on the job. This drop in leisure time has affected the type and location of recreational activities. People are recreating closer to home and spending less time at the places they visit. People also spend a higher percentage of their available leisure time at or near their homes doing things like jogging and bicycling.

The implications of these trends for outdoor recreation in different regions of the country are not yet clear. The policy issues involve trading off the economic and other values associated with outdoor recreation with the alternative uses of the resources required by recreation. While recreation is a large and growing sector of the economy, it does have its negative side. Most recreation-based jobs are low-paying service sector jobs. Communities also face such problems as loss of identity, the transfer of power to nonresident landowners, and growth pains.

Conclusions

All natural resource and environmental policy issues involve difficult trade-offs among alternative resource uses, economic development and environmental quality. The complexity of the issue depends, in part, on the resource involved. For mining, the issues are trade-offs between the economic value of the extracted resource and the environmental costs of extraction, processing and use. Forestry adds the complication of a resource that has one type of value when it is harvested and a mutually exclusive value as a standing forest. Moreover, many of the values of the standing forest, such as watershed protection, wildlife habitat and scenic beauty, are very difficult to measure in dollar terms. The fishery has all of the complications of forestry issues, such as pitting commercial against recreational interests, but adds the complication of a resource that has, in many areas, been severely damaged by nonpoint sources of pollution. Finally, outdoor recreation is a cross-cutting issue, one that is strongly affected by environmental quality and the decisions that are made on forestry and fishery management and land-use decisions that affect wildlife habitat and fisheries.

The role of public policy educators in this area is the same as with agriculture and other rural issues, i.e., to clarify extremely complex and controversial issues, increase understanding of alternatives and the trade-offs among alternatives, and provide an open, unbiased public forum for the exchange of ideas. If public policy educators do not help, who will?[1]

NOTES

1. A longer version of this paper is available on request from the author.

REFERENCES

Cordell, H. Ken. "Outdoor Recreation and Wilderness." *Natural Resources for the 21st Century*, ed. R. N. Sampson and D. Hair. 150L pp. 242-268. Washington, DC: Island Press, 1990.

Gordon, William G. "Fisheries." *Natural Resources for the 21st Century*, ed. R. N. Sampson and D. Hair, pp. 205-241. Washington, DC: Island Press, 1990.

Harrington, Winston. "Wildlife: Severe Decline and Partial Recovery." *America's Renewable Resources: Historical Trends and Current Challenges*, ed. K. D. Frederick and R. A. Sedjo, pp. 205-248. Baltimore, MD: Johns Hopkins University Press, 1990.

Hunter, Susan. "The 1990 Clean Air Act: Immediate and Long Term Impacts on West Virginia. *West Virginia in the 1990's: Opportunities for Economic Progress*, ed. R. J. Dilger and T. S. Witt, pp. 123-148. Morgantown, WV: West Virginia University Press, 1993.

James, P. *The Future of Coal*. London, England: MacMillan Press, 1982.

National Acid Precipitation Assessment Program (NAPAP). *1990 Integrated Assessment Report*. Washington, DC: Nov. 1991.

Portney, Paul R., ed. *Public Policies for Environmental Protection*. Baltimore, MD: Johns Hopkins University Press, 1990.

Sedjo, Rodger. "Forest Resources: Resilient and Serviceable." *America's Renewable Resources: Historical Trends and Current Challenges*, ed. K. D. Frederick and R. A. Sedjo, pp. 81-120. Baltimore, MD: Johns Hopkins University Press, 1990.

U.S. Travel Data Center. *Discover America 2000*. Washington, DC: U.S. Government Printing Office, 1989.

ENVIRONMENTAL POLICY: IMPACTS ON NATURAL-RESOURCE-BASED ECONOMIC DEVELOPMENT

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Clean air, clean water and clean land policies, if totally implemented, would have dramatic positive impacts on the economic development of the fishing industry. The clean water policy alone would provide the opportunity for declining fish populations to rebuild. In the southeastern United States, according to the National Marine Fisheries Service, 85 percent of the fish species sought by commercial fishermen are estuarine dependent. Estuaries' health determines fisheries' fate. At this point in time, construction near wetlands, storm water runoff, nonfunctioning septic tanks and pollution associated with heavy industry as well as municipal wastes decide the fate of most marine critters.

Some so called "environmental policies" really are not environment related at all. For instance, some conservation associations say banning the commercial harvest of redfish was a good "environmental policy." We view the decision to reserve the redfish resource solely for sportfishermen as a political "taking" decision having nothing whatsoever to do with the environment or conservation. Sportfishermen took the resource away from non-boating consumers. It is as simple as that.

An extreme example of what some people call "environmental policy" is a Florida conservation association's constitutional amendment petition drive to ban *all* gill nets in Florida waters and ban all other net types with more than 500 square feet of webbing. They call this an "environmental effort." The Audubon Society and several other "eco-groups" have endorsed this petition in the name of "conservation." This is not an environmental question. The sportfishing organization merely wants all the fish in the water reserved for the sportfishing angler. These are two examples of what some groups refer to as "environmental policy" but which we strongly argue have nothing to do with the environment or conservation. These types of political situations only decide "*who gets the fish.*" An honest public policy should be developed making sure all citizens have a reasonable and affordable opportunity to share in the commonly-owned marine resources and not just those who have boats, motors and who live near, or can drive to, the shore.

On the other hand, a very true environmental policy is that which has been expressed in the Endangered Species Act. This act requires that species listed as threatened or endangered be protected from harm. Several species of marine turtle, i.e., green, ridley, leather and hawksbill, have been listed as endangered and the loggerhead turtle has been listed as threatened. Our organization was on the cutting edge of the development of turtle excluder devices (TEDs) and by voting to comply with the law in a vigorous fashion and convince the rest of the shrimp industry to do likewise. This caused controversy within the industry and a radical group in Louisiana formed with the sole purpose of *not* using turtle excluder devices. Many of our boat members aligned with Louisiana on this issue and our membership dropped.

As an indication of our success in complying with the law, the Florida shrimp industry has achieved a 99 percent compliance rate in the use of TEDs and National Marine Fisheries Service has reported the turtle stranding in Florida from offshore shrimp trawling has been reduced by 90 percent. We modified our shrimping operations at our own expense by purchasing TEDs by cutting big holes in our nets to let the turtles pass through. At the same time, we have not seen our shrimp landings reduced to the point that shrimping is no longer profitable. TEDs have cost us money. We have lost shrimp production. But the law is the law and until it is changed we will comply with it.

Water quality is very important to the seafood industry. A large oyster industry in Apalachicola, Florida, keeps water quality on the front burner in several agencies. We believe if we could bring all Florida water quality up to the standards required for oyster harvesting, we could assure a highly productive and extremely valuable legacy for future generations. We believe our goal to keep Apalachicola Bay, Cedar Key and other areas open to oyster harvesting is the main defense available to prevent our natural resources from being depleted in the name of coastal development projects. While high rise resorts and golf courses tend to make everything look green and plush on site, they invariably lead to water degradation and to the loss of lifestyles and cultures common to many rural Florida coastal areas.

A strong environmental policy assuring excellent water quality is a must. Without one the seafood producing industry will not survive many more decades.

True environmental policies have a very positive impact on commercial fishing. If a certain species of fish has declined in individual size and cumulative pounds for several fishing seasons, it is reasonable to conclude this particular species is over-fished and in need of a sound environmental policy that will bring the population back to equilibrium.

However, with government regulation today it seems anytime a species shows decline, the "environmental policy" is to close down commercial seafood production and blame that sector for over-harvesting.

For instance, when the regulators wanted to develop a management plan for king mackerel, they decided nets were the culprits and should be curtailed. When the landing statistics came to the fishery management council, however, they showed the recreational fishermen had historically taken 68 percent of the total and the commercial fishery (both net and hook and line) harvested the other 38 percent. Going deeper into the 38% commercial catch, only 47 percent of the 38 percent came from nets. In other words, less than 20 percent of the total king mackerel harvest was being caught by nets but nets were blamed and are still blamed for the decline in the king mackerel fishery. Federal and state statistics show 81 percent of all the king mackerel killed were killed by hook and line fishing. Just another example of who gets the fish. *Who gets the fish* will never be an "environmental policy."

In the fish wars, "perception is reality." Some sportfishing groups have convinced some legitimate environmental groups "that in order to save the fish in the sea, commercial fishing must be banned." One of the most cruel tactics being used in Florida is to show pictures to people of large foreign factory ships with dolphins in their nets and say, "We have to ban the nets in Florida to save these poor dolphins." There has never been a factory ship in Florida waters or off the coast of Florida and there never will be. We do not have the fishery biomass required for such harvesting techniques. However, many Florida residents believe this propaganda when they read it in sporting magazines and outdoor writers' columns.

Another vicious tactic is to show a picture of a porpoise in a net somewhere in the world and ask unsuspecting petition signers, "Don't you want to stop this slaughter?"

Please believe me, Flipper is not in danger from Florida's fishing nets. If Flipper has an enemy, it is turbo-charged speed boats, jet skis, pollution and theme parks. The Florida Department of Environmental Protection reports that thirty-five porpoises died in captivity from 1986 to 1992 while only seven porpoise deaths were remotely tied to commercial fishing operations during the same time period.

I make these remarks because few people are in a position to know all the nuances of any controversy and thirty years of involvement with marine harvesters of fish and shellfish has filled my database.

Another example of what I call "mythinformation" are news releases written by one particularly mean-spirited group and sent to all

Florida newspapers telling them shrimp trawlers are killing thousands of juvenile red snappers in their shrimp nets.

This is somewhat true for the brown shrimp fishery off the Texas coast during a certain part of the year, but absolutely false as it pertains to Florida shrimpers. For a shrimp vessel to catch a red snapper off Florida it would have to drag on rocks that would tear up the nylon nets. But the perception in the mind of the general public is that Florida shrimp trawlers are killing red snapper. This is a false statement and the people making it know it is propaganda.

So, what does all this have to do with the topic of how environmental policy impacts resource-based economic development? Or whose dollar bill is the biggest? Everything.

If the militant angler clubs can get the media to mold public opinion, which in turn is then used as the basis for an environmental policy that reserves the marine natural resources for sports anglers, then the anglers will have succeeded in totally destroying a food producing industry, savaging an entire culture and, at the same time, eliminating all commercial fishing. If the industry is eliminated, then the economic impacts to commercial fishing that might have been used to prevent unbridled coastal wetland development in order to produce a better environment will have been destroyed. That is certainly a big dollar bill.

The sad part about this entire scenario is that there really are available resources for both commercial and sport fishing. Our credo is to share the fishery resources while the anti-seafood groups seem to want all the fish.

Environmental impacts on the commercial fishing industry can be 1) excellent, 2) tolerable, or 3) absolute destruction:

1. Clean water, clean air and clean land are *excellent* for the seafood industry.
2. Turtle excluders, by-catch excluders, closed seasons, quotas and trip limits are *tolerable* and sometimes necessary.
3. Net ban petitions and federal and state regulations based on faulty science are *absolute destruction*.

The greatest scam that has taken place in the debate between the commercial fishing industry and the sport fishing industry is that a relatively few businessmen from some of America's largest energy and real estate development companies have put up enough dollars to convince some honest conservationists and environmentalists that destroying the commercial fishing industry is environmentally sound, aesthetically pleasing and politically correct. How about those "buzz words"? In reality it will only pave the way for some of these men to build more marinas, golf courses and very expensive houses in the coastal areas of Florida.

Conversely, this proposed corporate takeover of the marine resources under the banner of environmentalism offers a good opportunity to expose the real destroyers of the wetlands and fisheries for what they really are. We have accepted that challenge and opportunity.

Conclusion

Sound Environmental Policy: Positive Impacts

- Provides clean water for maximum fisheries habitat.
- Provides ecosystem management which is more effective than species management.
- Provides for fewer dredged and filled wetlands which equals more marine life.
- Provides opportunity to rebuild any declining fish stocks.
- Provides opportunity to save endangered species.
- Provides opportunity to protect marine mammals that are in need.
- Provides opportunity to leave our planet better than we found it.

Sound Environmental Policy: Negative Aspects

- Short-term economic losses in implementing new requirements.
- Some short-term social disruption among some citizens.

Public policy issues of intensity to be re-examined include: flawed science, netting ban, allocation of resources among user groups, water quality, endangered species, marine mammal protection, coastal zone use, turtle excluder devices, by-catch reduction devices, and transfer of marine resource management to game and fish commission.

The elimination of commercial fishing will have monumental social and economic costs. Some communities will face bankruptcy. County, state and federal assistance programs will be strained beyond their ability. The very real possibilities of disrupted families, divorces, spouse abuse and loss of life do exist. It will be difficult when an entire socioeconomic group is told they can no longer have a job in their chosen profession harvesting fish for others because another group wants to use the fish for recreation and that group had enough wealth and political clout to shut down commercial seafood production in state and federal waters.

There needs to be a well-thought-out public policy toward the production of food from the sea. The policymakers at all levels of government must take a proactive stance in favor of America's first industry if it is to survive the 1990s here in Florida as well as in the other southeastern states.

TOURISM, NATURAL ENVIRONMENTS AND PUBLIC POLICY

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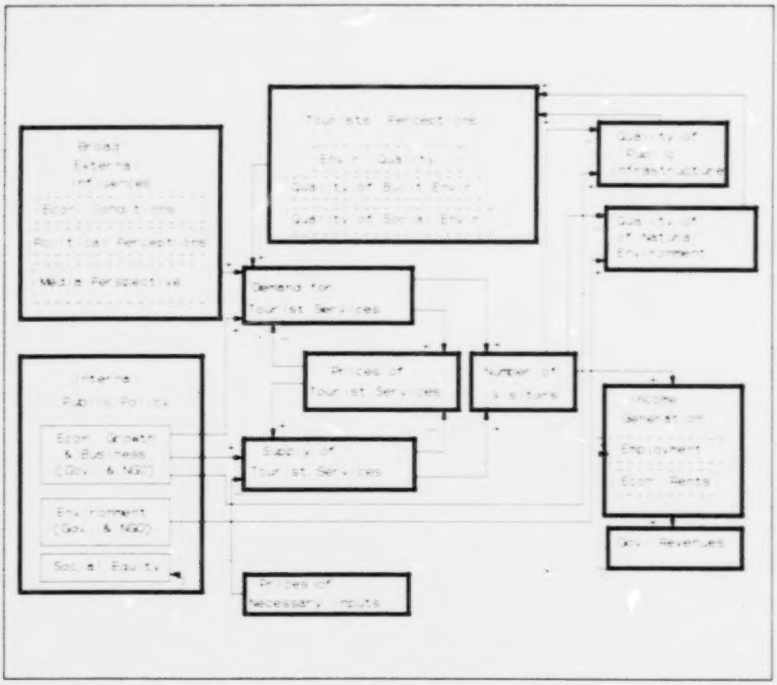
World-wide, tourism has become a major economic sector. In Florida, for example, it is the largest economic sector, dealing with more than 40 million visitors annually. Caribbean countries, with which countries the authors are acquainted, have seen the majority of their economic growth stemming from this sector (Deere, et al., p. 19). Jamaica, for example, saw a 17 percent growth in visits in 1990 (Planning Institute of Jamaica, p. 13-1). The World Bank, in fact, claims tourism is the world's largest economic sector. Yet, little specific information is available on tourism, either in aggregate terms or for specific locations. For example, even in Florida and Jamaica the reporting of macroeconomic data (Bureau of Economic and Business Research; Planning Institute of Jamaica) there are not clear listings for tourism as an economic sector. Little is known about the relationship between tourism and the local setting, a component that appears important in attracting tourists. Further, little public policy has been focused directly on the tourism sector and its relationship to natural resources. Essentially, economists and policy analysts have visited little attention on this broad and diverse economic sector.

In our brief comments we will consider tourism as it relates to economic growth, public infrastructure and natural environment. Florida and the Caribbean will be used as examples. The presentation will be broad with a number of generalizations. Please bear with us in this general approach. We find that when people begin to identify issues of concern, often issues with little concrete information, it is helpful to deal with them at an "appropriate level of vagueness." The approach allows all interested parties to have an opinion and to contribute to the clarification of critical issues. We will be working at a "vague level" and hope that it will be "appropriate."

The major tool to be used is a schematic (Figure 1). The idea for this representation derives from work being done with digraphs and "fuzzy cognitive maps" (Kosko, 1992, pp. 152-158; Kosko, 1993, pp. 222-235). While we recognize many components and influences are not illustrated, use of the digraph allows us to focus on specific concepts (the rectangles) and their interactions (arrows with associated signs).

When considering tourism as illustrated in the schematic, it is helpful to think in terms of interacting processes: demand processes,

Figure 1. Diagraph of Tourism Sector.


Tourists' Perceptions
Envir. Quality
Quality of Built Envir.
Quality of Social Envir.
Broad External Influences
Econ. Conditions
Political Perceptions
Media Perspective
Quality of Public Infrastructure
Quality of of Natural Environment
Demand for Tourist Services
Prices of Tourist Services
Number of Visitors
Income Generation
Employment
Econ. Rents
Gov. Revenues
Internal Public Policy
Econ. Growth & Business (Gov. & NGO)
Environment (Gov. & NGO)
Social Equity
Supply of Tourist Services
Prices of Necessary Inputs

supply processes, public policy processes and natural processes. In essence, outside forces increase demand, expanding demand triggers supply responses, the number of visitors increases rapidly, the region's aggregate income grows, government revenues increase, etc. Of course, in reality, these processes are highly nonlinear and intertwined.

Demand and Supply

Demand for travel is growing. Media acquaint people with a wide range of locations and cultures. People have active interest in travel and develop perceptions of locations long before they visit specific sites. Their interests are varied. For some, the idea that Florida and the Caribbean are sunny and warm in February and March is enough, while increasingly others are taking interest in cultures and unique environments. Advertising by private and government organizations—we have all seen Jamaica's and Florida's ads—aid people in envisioning themselves having a wonderful time in a location. As a result, people travel to these locations in increasing numbers. We economists say demand is growing rapidly.

The supply response derives from actions by both private and public entities. The private sector provides hotels, restaurants, shops, attractions, etc. as part of normal commerce, while government provides airports, roads, parks, etc. as part of a broad set of public services. In cases in which the number of visitors that come to a location is as large as it is in Florida and the Caribbean, the levels of business and government activities necessary are of huge magnitude. These activities tend to dominate commerce and government and create large numbers of jobs. Populations grow as people move to take advantage of job opportunities.

Components not always recognized as important in generating tourist services are the natural and cultural settings. Often it is the environmental and cultural contexts that are the basis of the tourism potential. Unique natural settings provide service flows essential to the actual tourist services the consumers value. Florida's sunny beaches and the Caribbean's colorful Creole culture and lush tropical ecosystems are examples. These components, in many ways, have characteristics of public goods and, to a considerable degree, are seen as open access resources. The substantial economic rents generated by the settings and the relative open access to these resources lie behind their apparent over-development.

Public Policy

Public policy related to tourism has been, and remains, an integral part of overall economic growth policy. The focus has been largely on expanding the potential for capturing economic rents resulting from development of local natural resources. In Florida, the state government sold wetlands and allowed these to be dredged and filled; it built highways through other fragile ecosystems and bridges to barrier islands; it allowed hotels and time-share condominiums to be built just feet from the shoreline. In the Caribbean, governments built airports (often on filled coastal wetlands) to handle the largest airliners, port facilities for cruise ships, and hotels. In both Florida and the Caribbean, public funds are used for advertising and promotion. Often nongovernment entities and government agencies work in accord to foster additional tourism enterprises. Such activities are supported politically, since increased employment is seen as a primary outcome. Overall, growth in tourism is seen as good, and a major goal of public policy is to aid the growth.

Additional considerations are being added to public policy discussions relating to tourism. First, those gaining from tourism are seeing threats originating in other sectors of the economy. Differing public policy positions are being heard and conflict is increasing. In Florida, offshore oil drilling is being fought, sports fishers are attempting to have commercial net fishing banned, and agriculture's release of drainage water into the Everglades National Park is being challenged. Similarly, in the Caribbean, oil facilities, mining and agriculture are seen as threats to reefs and coastal resources. Economic interests are seeing billions of dollars of potential loss and gain—and public policy debates are heating up.

Expanding tourism also is being seen as a threat to itself. It is being recognized that any given location has an upper limit to the amount of activity it can absorb without deterioration of natural processes. While the upper limit is not known, people are beginning to think that limit is being approached. Growth in the Florida Keys threatens the ecosystem of Florida Bay and offshore reefs and has led to a controversial designation of the Keys as an "Area of Critical State Concern." Proposals by the Florida Turnpike Authority would extend the turnpike through critically important wetlands. Demand for beachfront land for hotels and tourist facilities threatens the planned Archie Carr National Wildlife Refuge which would provide habitat for several endangered species. Likewise, the Caribbean has many cases. In Jamaica the government has allowed hotels to continue to be built in Negril even though present tourist loads are causing identifiable damage to fresh water wetlands and marine systems (Tolisano and Kiker). Again, the outcomes mean gains for some and losses for others. For many tourist destinations, whether in warm locations like Florida and the Caribbean, Third World wildlife parks or winter sports areas, similar problems are arising accompanied by increasing hostilities among rent-seeking interest groups.

The underlying causes are far too numerous for us to deal with here. We can, however, say that, in most cases, explicit forums are missing in which to consider a broad range of goals for the tourism sector. This may be because the tourism sector in many locations is so young it has yet to be recognized as an important segment of the local economy. Whereas agriculture, mining and manufacturing have been recognized and supported as major components of the local economy for some time, tourism is just now being viewed this way. In many locations it has been viewed like a frontier with economic rents to be captured by both private and public entities. There has been little or no recognition that deterioration of the natural setting of tourism could ultimately lead to reduction in demand in the region. Where attention is given, it is generally only after a major problem has become apparent to all, for example, traffic congestion, inadequate sewage and waste disposal, shortage of shorelines in a natural state, collapse of an ecosystem, and by then remediating action is complex and expensive (Dixon and Sherman, pp. 197-199).

Public Policy Education

It seems to us there are two roles public policy education can play. First, in areas in which tourism is related to natural resources and environments, but is not viewed as the major economic sector, the best approach would be to focus on the ongoing economic and natural resource issues being identified by community residents. These may or may not be identified with area tourism. Educational approaches dealing with the broad set of public policy issues will help develop knowledge and capability within the community. When specific issues concerning tourism and natural resources arise, community knowledge and capabilities can be brought to bear. In making this suggestion, we realize that most of you are already using this approach and understand it far better than we do.

The second suggested approach applies to areas such as Florida and the Caribbean in which tourism is recognized as a dominant economic sector. In such areas there is a need to develop public policy forums for dealing with community and natural resource issues directly related to tourism. In these areas, economic conditions will induce even greater tourism activities, and it will be important that the entire community recognize that, ultimately, overuse and deterioration of facilities and natural environments will result if balancing actions are not taken. Natural processes in specific locations have maximum capabilities for absorbing human activities without dramatic change. Unfortunately, for most locations the natural processes are so poorly understood it is not possible to say exactly what the limit is. By working in a public forum in which the many interests concerned about the economic potential of tourism are represented, there is an opportunity for balancing the rent-seeking behavior before the rents begin to decline. While the approach will be messy, as all public policy processes are, it will provide a forum in which to learn about the relationship between tourism and its setting as specific actions are taken. As the tourism sector matures, knowledge about it will be available for resolving problems.

Additionally, we believe there is an opportunity for creative research here. The basic premise is that progress toward solution of complex problems can be made, even when associated issues are poorly defined, if the many actors can at least agree upon a broad set of goals. What we have in mind stems from a developing body of literature that focuses on the evolution of complex systems, systems with so many components and interactions they cannot be represented by usual approaches. We find the work on "fuzzy" adaptive systems by Bart Kosko (1992, 1993) most interesting. The approach is essentially model free and builds linguistically. Actions to be taken are inferred from qualitative appraisal by actors as to whether previous actions moved the system toward or away from agreed upon goals. Subsequent actions are implemented to the degree that similar previous actions moved the system toward or away from the goals.

To us this approach is the essence of what public policy and institutional development is really about. Following the concepts of fuzzy adaptive systems allows a more explicit linkage of actors' qualitative judgments of previous outcomes and future potential actions. We think it would be interesting to take on a public policy education effort dealing with tourism and environment using this structured approach. Of course, a location in Florida or the Caribbean would be ideal. Both provide interesting economic, social and environmental conditions for such an analysis. The analysis could provide clarification of the interactive roles of tourism, other sectors and environmental conditions with the local economy, and allow academics to study the details of public policy evolution. Given the growth of tourism, the effort could lay the groundwork for applied research in other locations. Plus it would be a lot of fun to do.

REFERENCES

Bureau of Economics and Business Research. *1991 Florida Statistical Abstract.* Gainesville, FL: The University Presses of Florida, 1991.

Deere, Carmen Diana, et al. *In the Shadows of the Sun: Caribbean Development Alternatives and U.S. Policy.* Boulder, CO: Westview Press, 1990.

Dixon, John A., and Paul B. Sherman. *Economics of Protected Areas.* Washington, D.C.: Island Press, 1990.

Kosko, Bart. *Neural Networks and Fuzzy Systems.* Englewood Cliffs, NJ: Prentice-Hall, 1992.

Kosko, Bart. *Fuzzy Thinking: The New Science of Fuzzy Logic.* New York, N.Y.: Hyperion, 1993.

Planning Institute of Jamaica. *Economic and Social Survey Jamaica 1990.* Kingston, Jamaica: Government of Jamaica, 1991.

Tolisano, James, and Clyde F. Kiker. *Jamaica Environmental Strategy.* Kingston, Jamaica: U.S. Agency for International Development, 1991.

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